Foreword by **Dr Tunji Alausa**
Honourable Minister of Education

NATIONAL UNIVERSITIES COMMISSION

Africa Centres of Excellence

KEY ACHIEVEMENTS AND IMPACTS OF THE AFRICA CENTRES OF EXCELLENCE (ACE) PROJECT IN NIGERIA

Volume 1

Summary of the Achievements of the Centres

Compiled by
Professor Abdullahi Yusufu Ribadu
Executive Secretary, National Universities Commission
and
Dr Joshua A Atah
National Coordinator, Africa Centres of Excellence

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HIS EXCELLENCY

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FOREWORD

Education is the foundation of development, and, in Nigeria, we are dedicated to transforming higher education into an effective engine of change. The Africa Centres of Excellence (ACE) Project holds special significance for Nigeria, having served as the catalyst we needed to move forward into the next phase of our growth in the higher education sub-sector.

It is therefore with great pride and a deep sense of purpose that I present this compendium on the *Key Achievements and Impacts of the Africa Centres of Excellence (ACE) Project in Nigeria*. This publication captures not only the milestones attained through the ACE Project but also the transformative power of strategic investment in research, innovation, and institutional capacity within Nigeria's higher education system.

Launched in 2014, the ACE Project was designed to promote specialisation among participating universities in Science, Technology, Engineering and Mathematics (STEM), Agriculture, and Health. These areas address common regional development challenges.

Through the ACE Project, our Centres of Excellence have collectively trained over 16,000 candidates in postgraduate programmes and short courses, with women representing about 35 per cent of this number, contributed to over 2,000 peer-reviewed publications, secured competitive research grants, and built modern laboratories that meet global standards. These projects address critical development issues, including infectious and neglected diseases, food security, digital technologies, climate change, and many other urgent concerns. The ACEs have elevated the quality of teaching and research in our universities, becoming vibrant ecosystems for innovation, entrepreneurship, and international partnerships.

I am delighted and proud of the milestones that have been achieved with this project. The ACE Project is undoubtedly one of the key pillars supporting President Bola Ahmed Tinubu's *Renewed Hope Agenda*. The achievements documented in this compendium reflect the dedication of the universities' Vice-Chancellors, faculty, researchers, students, and our partners, including the World Bank, the Agence Française de Développement (AFD), and the Association of African Universities (AAU). I express my sincere appreciation to them for their unwavering support. I also want to acknowledge the dedication of the National Universities Commission (NUC) for coordinating this initiative and for producing this important compendium.

As we look ahead, the ACE model stands as a blueprint for deepening impact across the Nigerian University System (NUS). The potential for the future is extensive as a result of the sustainability plans that have been put in place to ensure a

consolidation of the Project's achievements. We are confident that the NUC's strategy of integrating the Centres into the structures of their host universities will enable us to sustain the gains post-project closure.

It is noteworthy that our vision and goals were realised. We must, however, redouble our commitments. I therefore urge all stakeholders - policymakers, development partners, academics, and industry leaders - to reflect on the successes herein, hopeful that they will inspire further investments in higher education and drive the reforms needed to position Nigerian universities as engines of national and regional development.



Dr Maruf Tunji Alausa
Honourable Minister of Education
Federal Republic of Nigeria

LIST OF ACRONYMS

AAU	-	Association of African Universities
ACE	-	Africa Centres of Excellence
ACEDHARS	-	ACE: Drug Research, Herbal Medicine Development and Regulatory Science
ACE-FUELS	-	ACE: Future Energies and Electrochemical Systems
ACEGID	-	ACE: Genomics of Infectious Diseases
ACEITSE	-	ACE: Innovative and Transformative STEM Education
ACE-MFS	-	ACE: Mycotoxin and Food Safety
ACENPEE	-	ACE: New Pedagogies in Engineering Education
ACENTDFB	-	ACE: Neglected Tropical Diseases and Forensic Biotechnology
ACEPHAP	-	ACE: Centre for Population Health and Policy
ACEPRD	-	ACE: Phytomedicine Research and Development
ACE-PUTOR	-	ACE: Public Health and Toxicological Research
ACE-SPED	-	ACE: Sustainable Power and Energy Development
ACETEL	-	ACE: Technology-Enhanced Learning
AFD	-	Agence Française de Développement
AEFUTHA	-	Alex Ekwueme Federal University Teaching Hospital, Abakaliki
ANR	-	Agence Nationale de la Recherche
APHEA	-	Agency for Public Health Education Accreditation
AQAS	-	Agency for Quality Assurance through Accreditation of Study Programs
ARISE-PP	-	African Research Initiative for Scientific Excellence-Pilot Program
ASF	-	African Swine Fever
BCH	-	Bacterial Cellulose Hydrogel
BMBF	-	Bundesministerium für Bildung und Forschung
CACPLA	-	Communicate, Active, Collaborate, Problem-based Solving, Learning, and Assessment
CApIC-ACE	-	ACE: Covenant Applied Informatics and Communication
CAR	-	Central African Republic
CDA	-	ACE: Dryland Agriculture
CEADESE	-	ACE: Centre for Agricultural Development and Sustainable Environment
CDC	-	Centre for Disease Control
CEFOR	-	ACE: Centre for Oilfield Chemicals Research
CEFTIC	-	Centre Food Technology and Innovation Complex
CERHI	-	ACE: Reproductive Health Innovation
CEFTER	-	ACE: Food Technology and Research

CHAPL	-	Cooperative, Hands-On, Active, Problem-Based Learning
CMU	-	Country Management Unity
CNRS	-	Centre Nationale de la Recherche Scientifique
COVID-19	-	Corona Virus Disease
CTCA	-	Culturo-Techno-Contextual Approach
CVCNU	-	Committee of Vice-Chancellors of Nigerian Universities
DAAD	-	Deutscher Akademischer Austauschdienst
DENV	-	Dengue Virus
DFG	-	Deutsche Forschungsgemeinschaft
DLI	-	Disbursement-Linked Indicators
DLPCA	-	Discover, Learn, Practice, Collaborate, And Assess
DNA	-	Deoxribonucleic acid
DRC	-	Democratic Republic of Congo
ECG	-	Echocardiography
ECOWAS	-	Economic Community of West African States
EDCTP	-	European and Developing Countries Clinical Trials Partnership
EKV	-	Ekpoma Virus
FEDGEN	-	Federated GENeral
FUO	-	Fever of Unknown Origin
GDP	-	Gross Domestic Product
GK	-	Glycerol Kinase
GMBRTL	-	Genomic Molecular Biotechnology Research and Training Laboratory
HCERES	-	High Council for Evaluation of Research and Higher Education
HIV/AIDS	-	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HPC	-	High-Performance Computing
ICT	-	Information and Communication Technology
IDA	-	International Development Association
IDRC	-	International Development Research Centre
IGH	-	Institute of Genomics and Global Health
JSPS	-	Japan Society for the Protection of Science
JST	-	Japan Science and Technology Agency
LCMS	-	Liquid Chromatography-Mass Spectrometry
MBAP	-	Membrane Bound Acid Phosphatase
MGS	-	Male genital schistosomiasis
MSP	-	Membrane Surface Protein
NATIP	-	National Agricultural Technology and Innovation Policy

NCDC	-	National Centre for Disease Control
NCDMB	-	National Content Development and Monitoring Board
NDP	-	National Development Plan
NEPT	-	National Energy Transition Plan
NICRAT	-	National Institute for Cancer Research and Treatment
NMR	-	Nuclear Magnetic Resonance
NPE	-	National Policy on Education
NSF	-	National Science Foundation
NTD	-	Neglected Tropical Diseases
NUC	-	National Universities Commission
OAK-Park	-	ACE: Obafemi Awolowo ICT-Driven Knowledge Park
PAMI	-	ACE: Pan-African Materials Institute
QAA	-	Quality Assurance Agency
RBS	-	Royal Society of Biology
RKI	-	Robert Koch Institute
SENZOR	-	Social-Ecological Network Approach to Understanding Zoonotic Outbreak Risk
STEM	-	Science, Technology, Engineering and Mathematics
STH	-	Schistosomiasis/Soil-Transmitted Helminth
STI	-	Science, Technology and Innovation
STI	-	Sexually-Transmitted Infections
TOR	-	Terms of Reference
TS	-	trans-Sialidase
UEMOA	-	Union Economique et Monétaire Ouest Africaine
UKRI	-	United Kingdom Research and Innovation
WACCBIP	-	West African Centre for Cell Biology and Infectious Pathogens
WAHO	-	West Africa Health Organization
WAPP	-	West African Power Pool
WHO	-	World Health Organization

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The success of the Africa Centres of Excellence (ACE) Project in Nigeria, from ACE I to ACE Impact, is a testament to the unwavering dedication, foresight, and collaborative strength of a broad network of stakeholders committed to transformative education and research in Africa. The National Universities Commission (NUC) gratefully acknowledges the collective efforts of these stakeholders, which have been instrumental to the success of the ACE Project in Nigeria.

We extend profound appreciation to the **Federal Government of Nigeria** for its commitment to advancing higher education and research, which formed the backbone of this initiative. We acknowledge the strategic leadership of the **Federal Ministry of Education**, under the guidance of the **Honourable Minister of Education, Dr Maruf Tunji Alausa**, for providing strategic direction and consistent policy support for the implementation of the Project.

Special recognition is accorded to the **past Executive Secretaries of the National Universities Commission (NUC)**, under whose stewardship the project gained momentum – **Professor Julius A. Okojie**, who championed its inception and laid the institutional foundation for its successful implementation, **Professor Abubakar Adamu Rasheed**, whose tenure saw its deepening and expansion; and **Chris J. Maiyaki**, who provided steadfast leadership during a critical transition phase.

We are grateful to the **World Bank** and the **Agence Française de Développement (AFD)** for their partnership and technical assistance. We thank the **Country Directors** of both institutions, past and present, for their strategic oversight and unwavering support in delivering results across the ACE portfolio.

Sincere appreciation is also extended to the **present ACE Impact Task Team Leads, Namrata Tognatta (World Bank)** and **Wassim Hadj Ali (AFD)**, for their technical guidance, hands-on leadership and tireless coordination and to AFD's **Ms Plangnan Dashen**, for her continued dedication and support.

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We acknowledge the role of the **Association of African Universities (AAU)**, particularly the **Secretary General, Professor Olusola Bandele Oyewole**, and his predecessor, **Professor Etienne Ehouan Ehile**, for their exemplary regional leadership. We commend the efforts of the **ACE Project Team at the AAU**, especially the **ACE Programme Manager, Ms Sylvia Mkandawire**, and former Programme Manager, **Professor Jonathan Mba**, for their coordination and capacity-building support.

To the **Vice Chancellors of the 17 ACE host universities**, your institutional leadership have been pivotal to the successful implementation of the Project, fostering excellence and ensuring impact. We also salute the tireless efforts of past and present **Centre Leaders of all 20 ACEs in Nigeria**, alongside their dedicated staff, whose day-to-day work turned policy into practice and whose hard work and dedication brought these achievements to life.

A special mention is due to **Dr Joshua A. Atah**, the **National Project Coordinator and Focal Point for ACE 1 and ACE Impact**, whose exemplary leadership, dedication, and attention to detail have helped drive national progress and cohesion. We also appreciate the contributions of the hardworking **staff of the NUC Project Implementation Unit (NUC-PIU)**, whose behind-the-scenes efforts keep the wheels of this project in motion.

To all other stakeholders, local, regional, and international, your partnership, resilience, and excellence continue to lay the foundation for a vibrant and globally competitive academic landscape in Nigeria and Africa at large. This compendium stands as a testament to the power of partnership, innovation, and shared vision.

Professor Abdullahi Yusufu Ribadu
Executive Secretary, National Universities Commission

EXECUTIVE SUMMARY

The Africa Centres of Excellence (ACE) Project represents a landmark effort to reposition higher education in Nigeria and across sub-Saharan Africa. As the implementing agency for the ACE Project in Nigeria, the National Universities Commission (NUC) aimed to ensure that the entire process of conceptualising, implementing, monitoring, and evaluating this prestigious World Bank project becomes a record of results that demonstrates our contribution to Nigeria and Africa. We are proud to say that, today, this objective has been actualised. The ACE Project has empowered 17 participating universities, through the 20 competitively selected Centres, to address pressing development challenges through demand-driven postgraduate education, cutting-edge research, and has strengthened regional collaboration.

From providing enhanced laboratory infrastructure and winning competitive grants to producing high-impact publications, filing patents, establishing industry linkages, and training thousands of master's and doctoral students, the Nigerian ACEs have made remarkable contributions to national development priorities in health, agriculture, education, engineering, ICT, and the environment. Their success demonstrates the value of results-based financing, regional collaboration, and strong regulatory oversight in driving excellence and accountability.

As the regulatory and coordinating agency for university education in Nigeria, the NUC is proud to have played a central role in facilitating the implementation and monitoring of the ACE Project. We conducted national accreditation and facilitated the international accreditation of academic programmes across all 20 ACEs, thereby placing the Centres on the global map. To date, all the ACEs have successfully upgraded their facilities and implemented improved curricula, aligned with international best practices for highly specialised postgraduate courses in critical areas identified by the NUC and field experts. These areas include training in oil and gas, agriculture and food security, public health and medical sciences, animal production, digital innovation and education, educational policies, environmental and climate change, renewable energy, emerging technologies, and geosciences. This publication, therefore, reflects NUC's strong efforts at reshaping Nigeria's higher education landscape.

Integrating the ACEs into the structures and policies of their host universities is NUC's strategy towards sustainability post-project closure. In recognition of the Centres' role in developing the requisite specialised human capital for growing economies across the region, the NUC remains committed to supporting them.

This compendium, titled *Key Achievements and Impacts of the Africa Centres of Excellence Project in Nigeria*, documents the tangible outcomes of the ACE initiative in Nigeria; outcomes that reflect the dedication, innovation, and resilience of our universities and their partners. It is presented in four volumes:

Volume 1 summarises the key achievements and impacts of the Centres, highlighting their performance in student enrolment, partnerships, internships, patents, accreditation of academic programmes and publications.

Volume 2 is a bibliographical presentation of all publications by faculty and students of each Centre. This extensive base of research information aims to enhance access to peer-reviewed journals, books and other publications and promote further research.

Volume 3 is a directory of researchers in each of the Centres of Excellence, detailing their areas of specialisation, affiliate institutions, contact information as well as the research and studies they have carried out. Through this directory, it is intended that new linkages would be established to further enhance research and knowledge generation among researchers.

The fourth and final volume lists available equipment in each of the ACEs. The activities of the Project involved the extensive development of laboratory facilities for high-level research across the Centres. This volume provides information on the description and location of the laboratory facilities, including the contact details of the universities where they are domiciled.

We are deeply grateful to the Federal Ministry of Education, the World Bank, Agence Française de Développement (AFD), and all other stakeholders for their partnership, support and continued interest. This gesture has not only reinforced our resilience and capacity to deliver on the project's goals but also strengthened our strategic partnerships at both national and international levels.

It is my hope that this compendium will serve not only as a record of achievements but also as a source of information and inspiration for stakeholders, policymakers, and development partners seeking scalable models of excellence and sustainability in African higher education. The ACE Project has set a new standard, and we are committed to sustaining and expanding its impact across the Nigerian University System.

INTRODUCTION

The Africa Centres of Excellence (ACE) Project was conceived as a regional response to the urgent need for quality, relevant, and sustainable postgraduate education and applied research in Africa. Supported from its inception by the World Bank in partnership with the Association of African Universities (AAU) and participating governments, the ACE Project was co-financed by the Agence Française de Développement (AFD) in its final phase, further strengthening its reach and impact. Over time, the ACE Project has become a flagship model for strengthening institutional capacity and driving innovation in higher education across sub-Saharan Africa.

In Nigeria, the implementation of both phases, ACE I and ACE Impact, has yielded transformative results. From modernising infrastructure and boosting regional student enrolment to securing research grants and establishing strategic partnerships with industry and government, the Centres have elevated the capacity of our universities to deliver world-class training and research across priority sectors such as health, agriculture, education, ICT, engineering, and the environment.

This Compendium on Key Achievements and Impacts serves as a documentation of the significant milestones recorded by the Nigerian ACEs. It provides evidence of results achieved, both quantitatively and qualitatively, through performance-based funding, collaborative leadership, and a sustained focus on excellence and accountability.

As the National Focal Point for the ACE Project in Nigeria, I have had the privilege of working closely with university leaders, Centre teams, and regional partners who have demonstrated exceptional commitment to the vision of the ACE Project. Their work, as detailed in this publication, speaks to what is possible when African institutions are empowered with the right mix of autonomy, accountability, and support.

I commend the National Universities Commission (NUC), the Federal Ministry of Education, our development partners, particularly the World Bank and the Agence Française de Développement (AFD), as well as the many academics, administrators, and students who have made the ACE Project a success in Nigeria.

We hope that the achievements captured in this compendium will inform future reforms and inspire further investment in Nigeria's higher education sector.

Dr Joshua Atah
National Project Coordinator/Focal Point
ACE Project, Nigeria

DESIGN OF THE PROJECT

The Africa Centres of Excellence (ACE) is a regional, World Bank and Agence Française developpement-supported higher education programme that supports over 70 centres in 20 countries across Western, Central, Eastern, and Southern Africa.

The first in the series, ACE I, was supported solely by the World Bank and was launched in Western and Central Africa (2014-2020), with the Republic of Benin, Burkina Faso, Cameroon, Cote d'Ivoire, The Gambia, Ghana, Nigeria, Senegal, and Togo as participating countries. Under this forst phase of ACE Project, Nigeria had 10 Centres across the three tiers of university proprietorship. Following the successful implementation of ACE I, where the Nigerian Centres demonstrated strong performance, the first and second ACE Impact Projects were launched in 2019. Under the Second ACE Impact Project, which is co-funded by the World Bank and Agence Française de Dveloppement (AFD), Nigeria has 17 Centres, seven of which were strong performers under ACE I, and so were renewed for funding under ACE Impact.

In the design of the ACE Project for Nigeria, the aim was to support the attainment of the key strategic agenda of the Government and people of Nigeria in the drive for development. Regionally, the Project also focused on promoting specialisation among participating universities to address common regional development challenges. It provided opportunities for strengthening the capacities of participating universities to deliver high-quality postgraduate training and applied research in the fields of Agriculture, Health, Education, and Science, Technology, Engineering and Mathematics (STEM).

Specific areas of attention included:

1. Infrastructure and facilities for teaching, learning, and research
2. Low-skilled manpower in diverse industrial sectors
3. Inadequate financing of education
4. Sustainability of education and research programmes
5. Inadequate number of qualified teachers in our universities
6. Poor healthcare services
7. Inadequate utilisation of Nigeria's agricultural potentials
8. Poor integration of technology in teaching, learning, research, and in the wider economic sectors.

In designing the project, attention was given to the priorities of the Federal Government of Nigeria. There were, therefore, far-reaching and encompassing consultations with stakeholders from across Nigeria and the world.

Stakeholders Consulted During Project Design

Stakeholders	Activities
In-Country Stakeholders • National governments (Ministries, departments and agencies in charge of higher education and research, line ministries) • Universities (management, faculty and students) and national research institutes	• Consultations on the overall project • National workshops (10 out of 11 countries) • Four Project Steering Committee meetings • ACE I Project regional workshop and ACE Impact Regional Bootcamp
Regional Bodies • ECOWAS • AAU • UEMOA	• Consultations on the project • ECOWAS Technical and Ministerial Meetings • Consultations with AAU on regional facilitation
World Bank • GPs and Office of the Chief Economist • Country Management Units (CMUs)	• Consultations on ToRs for Pre-Identified Regional Development Challenges (10 GPs) • Consultations on national participation and IDA allocation
Development Partners • AFD and IRD (France) • IDRC (Canada) • BMBF (Germany)	• Consultation on AFD co-financing • Consultations on project design • Consultations on partnerships post selection
Research Funding Agencies • ANR, CNRS (France) • DAAD, DFG (Germany) • UKRI (UK) • NSF (US) • Japan Society for the Promotion of Science (JSPS) and Japan Science and Technology Agency (JST) (Japan)	• Workshops and consultations on project design and partnerships with international academics and industry
Industry/Sectoral Players • ICT-oriented companies (Intel, Microsoft, Orange, Digital skills, Ericsson, Vodafone) • Solar energy companies • West African Health Organization (WAHO); • West African Power Pool (WAPP) • National Instruments • Royal Academy of Engineers (UK)	• Consultations on skills and applied research needs within various sectors • Discussions on potential areas of collaboration

Some of the strategic documents of the Federal Government considered in the design of the Project included:

1. *The National Policy on Education*
2. *The Transformation Agenda – 2011-2015*
3. *4-Year Strategic Plan for the Development of the Education Sector – 2011-2015*
4. *Agricultural Transformation Agenda – 2011-2016*
5. *Nigeria's Science, Technology, and Innovation (STI) Policy – 2011*
6. *National Information and Communication Technology (ICT) Policy – 2012*

7. *Nigeria's Economic Recovery and Growth Plan (EGRP) – 2017-2020*
8. *National Development Plan (NDP) 2021-2025*
9. *Nigeria Agenda 2050.*
10. *2nd National Strategic Health Development Plan – 2018-2022*
11. *Health Sector Strategic Blueprint, 2024-2027*
12. *Education for Change: A Ministerial Strategic Plan -2018-2022*
13. *Education for Renewed Hope: Roadmap for the Nigerian Education Sector (2024-2027)*
14. *Blueprint on the Rapid Revitalisation of University Education in Nigeria – 2019-2023*
15. *National Development Plan (NDP) 2021-2025*
16. *Nigeria Agribusiness Strategic Plan – 2023-2028*
17. *Nigeria Digital Agriculture Strategy – 2020-2030*
18. *National Agricultural Technology & Innovation Policy (NATIP) – 2022-2027*
19. *The Nigeria Strategic Plan – 2023-2027* (AGRA)
20. *Research & Development Roadmap* (Nigerian Content Development and Monitoring Board)
21. *National Policy on Science and Technology Education.*

The wide consultation and close integration of the government's priorities ensured that the Project was placed at the centre of Nigeria's development goals. It also helped promote regionalisation and collaboration with national, regional, and international organisations.

OBJECTIVES OF THE PROJECT

The objective of the project was to improve the quality, quantity, and development impact of postgraduate education in selected universities through regional specialisation and collaboration.

Project-Level Indicators

In line with the objectives of the Project, there were project-level indicators aimed at supporting the attainment of the objectives.

The Project-level Indicators were:

1. Number of students (national and regional) enrolled in specialised master's, Ph.D., and short-term professional courses/programmes in the ACEs (Quantity of Education & Regional Specialization)
2. Number of ACE programmes and ACE host institutions that obtain international accreditation (Quality of Education)
3. Percentage of ACE host institutions with a comprehensive strategic plan for regionalization (Regional Specialisation and Collaboration)
4. Number of ACEs with significant development impact (as measured by an independent evaluation of each center's impact on development at mid-term and end of project)
5. Number of students and faculty participating in internships at relevant institutions (Development Impact of Education)

Project Components

The Project had three components, as follows, aimed at further ensuring the attainment of project objectives. The components were:

1. Establishing new and scaling up well-performing existing ACE centres for development impact;
2. Fostering regional partnerships and scholarships; and
3. Enhancing project facilitation and Monitoring and Evaluation (M & E) at the national and regional levels.

Overview of Second ACE Impact Project Components and Sub-Components

Component 1	Component 2	Component 3
Establishing new and scaling-up well-performing existing ACEs for development impact	**Fostering regional partnerships and scholarships**	**Enhancing national and regional level project facilitation, and M&E**
Sub-component 1.1 Support to establish new centres of excellence **Sub-component 1.2** Support to scale up well - performing ACE I centres	**Sub-component 2.1** Support to emerging centrse (non-ACEs) for networking, regional technical assistance, and improving the learning environment **Sub-component 2.2** Support for PhD scholarships through the PASET Regional Scholarship & Innovation Fund	**Sub-component 3.1** Support for project facilitation and M&E at the regional level **Sub-component 3.2** Support for national-level coordination (Nigeria and The Gambia) by government- designated national higher education agencies

THE CENTRES

The Centres were selected through a strictly merit-based and competitive process. In addition, qualified academics and support team members were selected to manage the programme, including teaching, research, outreach and community engagements.

There was a total of 20 centres in the first and second phases of the ACE Project in Nigeria. The following were the Centres under the first phase of the Project:

S/No	Name of Centre	Host University	Area of Specialisation	Thematic Area
1.	ACE: Genomics of Infectious Diseases (ACEGID)	Redeemer's University, Ede	Genomics of infectious diseases	Health
2.	ACE: Neglected Tropical Diseases and Forensic Biotechnology (ACENTDFB)	Ahmadu Bello University, Zaria	Neglected tropical diseases	Health
3.	ACE: Reproductive Health Innovation (CERHI)	University of Benin	Reproductive Health	Health
4.	ACE: Dryland Agriculture (CDA)	Bayero University, Kano	Dryland Agriculture	Agriculture

5.	ACE: Food Technology and Research (CEFTER)	Benue State University, Makurdi	Food technology and research	Agriculture
6.	ACE: Obafemi Awolowo ICT-driven Knowledge Park (OAK-Park)	Obafemi Awolowo University, Ile-Ife	Digital Development	STEM
7.	ACE: Oilfield Chemicals Research (CEFOR)	University of Port Harcourt	Oil & Gas	STEM
8.	Pan-African Materials Institute (PAMI)	African University of Science and Technology, Abuja	Materials	STEM
9.	Phytomedicine Research and Development (ACEPRD)	University of Jos	Phytomedicine	Health
10.	Centre for Agricultural Development and Sustainable Environment (CEADESE)	Federal University of Agriculture, Abeokuta	Agriculture and Environment	Agriculture

In the 2nd phase of the project, seven of the ten original centres were selected for scaling up. They were:

S/No	Name of Centre	Host University	Area of Specialisation	Thematic Area
1	ACE: Genomics of Infectious Diseases (ACEGID)	Redeemer's University, Ede	Genomics of infectious diseases	Health
2	ACE: Neglected Tropical Diseases and Forensic Biotechnology (ACENTDFB)	Ahmadu Bello University, Zaria	Neglected tropical diseases	Health
3	ACE: Reproductive Health Innovation (CERHI)	University of Benin	Reproductive Health	Health
4	ACE: Dryland Agriculture (CDA)	Bayero University, Kano	Dryland Agriculture	Agriculture
5	ACE: Food Technology and Research (CEFTER)	Benue State University, Makurdi	Food technology and research	Agriculture
6	ACE: Obafemi Awolowo ICT-Driven Knowledge Park (OAK-Park)	Obafemi Awolowo University, Ile-Ife	Digital Development	STEM
7	ACE: Oilfield Chemicals Research (CEFOR)	University of Port Harcourt	Oil & Gas	STEM

In addition to these, ten (10) new centres were also selected as follows:

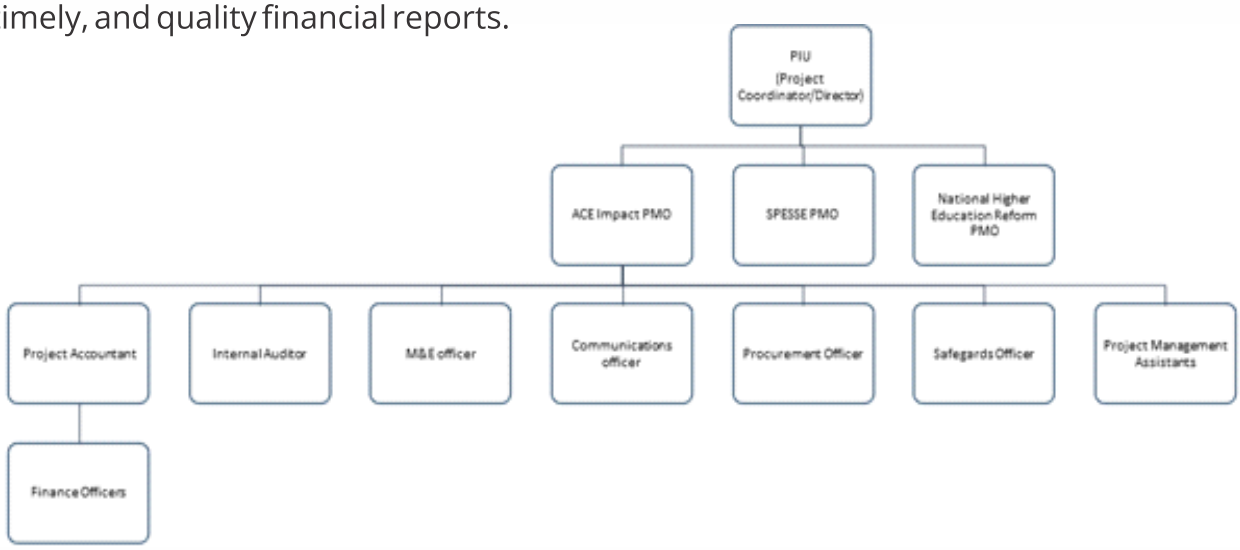
S/No	Name of Centre	Host University	Area of Specialisation	Thematic Area
1.	ACE: Public Health and Toxicological Research (ACE-PUTOR)	University of Port Harcourt	Nursing	Health
2.	ACE: Centre for Population Health and Policy (ACEPHAP)	Bayero University, Kano	Nursing	Health
3.	ACE: Covenant Applied Informatics and Communication (CApIC-ACE)	Covenant University, Ota	Digital Development	STEM
4.	ACE: Technology-Enhanced Learning (ACETEL)	National Open University of Nigeria	Digital Development	STEM
5.	ACE: Innovative and Transformative Stem Education (ACEITSE)	Lagos State University, Ojo	STEM Education	Education
6.	ACE: Mycotoxin and Food Safety (ACE-MFS)	Federal University of Technology, Minna	Mycotoxin and food safety	Health
7.	ACE: Drug Research, Herbal Medicine Development and Regulatory Science (ACEDHARS)	University of Lagos, Akoka	Herbal medicine development and regulation	Health
8.	ACE: New Pedagogies in Engineering Education (ACENPEE)	Ahmadu Bello University, Zaria	Engineering education	Education
9.	ACE: Sustainable Power and Energy Development (ACE-SPED)	University of Nigeria, Nsukka	Power	STEM
10.	ACE: Future Energies and Electrochemical Systems (ACE-FUELS)	Federal University of Technology, Owerri	Renewable energy	STEM

It is noteworthy that with a total of 20 Centres of Excellence, Nigeria hosts the highest number of ACEs on the Project.

IMPLEMENTATION OF THE PROJECT

In line with the guidelines and objectives of the ACE Project, the National Universities Commission (NUC) is the Implementation Agency for the Project in Nigeria.

The Commission setup a Project Implementation Unit (NUC-PIU) which is responsible for the day-to-day operations in facilitating the Project delivery in Nigeria. The PIU consists of the National Project Coordinator, Procurement Specialists, Financial Specialists, M&E Specialists, Internal Auditor, Communications Officers, Safeguards Specialists and other support staff. The PIU worked closely with the Centres, guiding them towards ensuring seamless implementation of their activities, especially in ensuring the timely execution of their operations. Part of the support mechanism provided to the centres was the engagement of a Financial Management Consultant to strengthen the capacity of the fiduciary team in the use of their accounting software and preparation of timely, and quality financial reports.



As part of its oversight functions, the PIU prepared monthly reports for the Executive Secretary of the NUC. It also prepared briefings to the biennial National Project Performance Review Committee (NPPRC) meetings.
The Project Implementation Unit supports the Centres through effective communication, guidance and training in implementation processes to ensure seamless operations, resulting in an excellent partnership between the Implementation Agency and the Centres towards attaining project objectives.

Each of the Centres, in line with the objectives of the Project, concentrated on national and regional development challenges with output centered across the following:

1. Scale-up postgraduate education
    a. High-quality postgraduate education
        i. Master's and Doctoral programmes to meet international standards
        ii. In-demand competences – analytical, digital, and entrepreneurial
        iii. Address skill gaps
        iv. Short courses to support mid-career professionals
2. Applied collaborative research
    a. Address applied research issues
    b. Partnerships across the globe to support research to address challenges
3. Outreach to address regional development challenges
    a. Regional education networks
    b. Disseminate research findings to policy makers and industrial organisations to ensure further impact through peer-reviewed journals
4. Policies to encourage
    a. Number of females in the student body, faculty, and academic leadership
        i. Training, mentoring and funding
    b. Well-being of students
5. Promoting good governance, data collection, and management
6. Regionalisation of the institutions towards global competitiveness

To enhance the Centres' commitment and performance in Project implementation, funds were released to them to them upon the achievement of indicators/results. There were seven disbursement-linked indicators (DLIs) and the release of funds for sub-components 1.1 and 1.2 was dependent on the achievement of all seven listed below:

DLI1 - Institutional readiness
DLI2 - Development impact of the ACE Impact Centre
DLI3 - Quantity of students with focus on gender and regionalisation
DLI4 - Quality of Education and Research through International Accreditation, Research Publication, and Improved Teaching and Research Infrastructure
DLI5 - Relevance of education and research through externally generated revenue, internships, and entrepreneurship
DLI6 - Timeliness and quality of fiduciary management; and
DLI7 - Institutional impact- to be accomplished by the ACE host institution

KEY ACHIEVEMENTS OF THE PROJECT

Promoting Access to Higher Education and Research

The Centres introduced new academic programmes at both master's and doctoral levels and to date, over 5,000 students have been enrolled in these programmes. This continues to enhance access to higher education within Nigeria and across the sub-region. This would also help address the inadequacy of doctoral degrees in Nigerian universities and facilitate the development of skilled manpower for the Nigerian industrial sector, thereby promoting productivity and economic growth.

All programmes offered by the Centres were accredited by national and international agencies. To ensure regional and international attraction, the PIU and the Centres worked with relevant stakeholders to pre-identify several internationally reputable quality assurance agencies with which we currently work. These include:

(i) Quality Assurance Agency for Higher Education (QAA), UK;
(ii) Agency for Quality Assurance through Accreditation of Study Programs (AQAS), Germany;
(iii) Agency for Public Health Education Accreditation (APHEA), Belgium;
(iv) Royal Society of Biology (RSB), UK; and
(v) High Council for Evaluation of Research and Higher Education (HCERES), France.

The engagement with these partners ensured quality checks/evaluation of academic programmes as well as institutional accreditation.

Each Centre was involved in the establishment and equipping of world-class laboratories and requisite infrastructure for teaching, learning, and research. These are highlighted and presented in sections of this material, which provide summaries of the achievements of each Centre.

ACE Impact Centres, Host Universities and Programmes Offered

SN	Name of Institution	Centre	List of Programmes
1	University of Port Harcourt https://www.uniport.edu.ng/	Centre for Public Health and Toxicological Research (PUTOR) https://www.aceputoruniport.edu.ng/putor/public/	1. MSc and PhD Environmental Health 2. MSc, PhD and Master of Public Health 3. MSc and PhD Epidemiology 4. MSc and PhD Health Systems and Management 5. MSc and PhD Population Reproductive Health 6. MSc Midwifery/Child Health Nursing, MSc Public Health Nursing and MSc Fertility Nursing 7. MSc and PhD Nutritional Biochemistry/Toxicology 8. MSc and PhD Environmental Biochemistry/Toxicology 9. MSc and PhD Enzymology 10. MSc and PhD Medical Biochemistry 11. MSc and PhD Toxicology 12. PhD Environmental Toxicology 13. MSc Petroleum Environmental Toxicology 14. MSc Marine Population and Seafood Safety 15. MSc Occupational Medicine 16. MSc Public Health Nutrition 17. MSc Information Management 18. MSc Information and Communication
		Centre for Oilfield Chemicals Research (CEFOR) https://aceceforuniport.edu.ng/	1. MSc Industrial Chemistry 2. PhD Chemistry 3. MSc and PhD Occupation Health and Safety 4. MSc and PhD Environmental Technology and Management 5. MSc Gas Refining and Petrochemical Engineering 6. PhD Petroleum and Gas Engineering 7. MSc Petroleum Engineering and Project Management

SN	Name of Institution	Centre	List of Programmes
			8. PhD Chemical Engineering 9. PhD Microbiology 10. PhD Biotechnology 11. MSc and PhD Natural Resources and Environmental 12. MSc Geosciences 13. PhD Geology
2	University of Benin https://uniben.edu.ng/	ACE in Reproductive Health Innovation (CERHI)	1. Master's in Maternal and Child Health Nursing 2. Master of Philosophy in Maternal and Child Health Nursing 3. Doctor of Philosophy in Maternal and Child Health Nursing
3	Ahmadu Bello University, Zaria https://www.abu.edu.ng/	ACE in Neglected Tropical Diseases and Forensic Biotechnology (ACENTDFB) https://acentdfb.abu.edu.ng/	1. MSc and PhD Biotechnology 2. MSc Forensic Science 3. Master's in Forensic Science
		Africa Centre of Excellence in New Pedagogies in Engineering Education (ACENPEE) https://acenpee.abu.edu.ng/	1. MSc and PhD Chemical Engineering 2. MSc and PhD Civil Engineering 3. MSc and PhD Mechanical Engineering 4. MSc and PhD Water Resources and Environmental Engineering
4	Redeemers University, Ede http://acegid.run.edu.ng/	ACE for Genomics of Infectious Diseases (ACEGID) https://run.edu.ng/	1. MSc and PhD Bioinformatics

SN	Name of Institution	Centre	List of Programmes
5	Benue State University, Makurdi https://www.bsum.edu.ng/	Centre for Food Technology and Research (CEFTER) https://www.cefterbsu.edu.ng/	1. MSc and PhD Rural Sociology and Agricultural Extension 2. MSc and PhD Post-Harvest Physiology and Management of Crops
6	Lagos State University, Ojo https://lasu.edu.ng/	Africa Centre of Excellence for Innovative and Transformative STEM Education (ACEITSE) https://lasu-aceitse.org/	1.MSc and PhD STEM Education and Entrepreneurship (with specialisation in Biology, Chemistry, Mathematics and Physics) 2.MSc and PhD ICT Education (Specialisation in Artificial Intelligence and Cyber Security
7	National Open University of Nigeria https://nou.edu.ng/	Africa Centre of Excellence in Technology-Enhanced Learning (ACETEL) https://acetel.nou.edu.ng/	1. MSc and PhD Artificial Intelligence 2. MSc and PhD Cyber Security 3. MSc and PhD Management Information System
8	Covenant University, Ota https://covenantuniversity.edu.ng/	Africa Centre of Excellence in Applied Informatics and Communication (CApIC-ACE) https://ace.covenantuniversity.edu.ng/	1. MSc and PhD Bioinformatics 2. MSc and PhD Computer Science 3. MSc and PhD Biochemistry 4. MSc and PhD Information & Communication Engineering
9	University of Nigeria, Nsukka https://www.unn.edu.ng/	Africa Centre of Excellence for Sustainable Power and Energy Development (ACE-SPED) https://acespedunn.edu.ng/	1. MSc and PhD Power Engineering 2. MSc and PhD Renewable and New Energy Systems 3. MSc and PhD Control and Instrumentation Engineering 4. MSc and PhD Industrial Electronics and Power Devices 5. MSc and PhD Sustainable Energy Materials Engineering

SN	Name of Institution	Centre	List of Programmes
			6. MSc and PhD Engineering Design and Product Development 7. MSc and PhD Management of Technology and Innovation 8. MSc Energy Policy, Regulation and Management 9. PGD in Additive Manufacturing Technology (3D Printing Technology)
10	Federal University of Technology, Owerri https://futo.edu.ng/	Africa Centre of Excellence in Future Energies and Electrochemical Systems (ACE-FUELS) https://acefuels-futo.org/	1. MSc and PhD Future Energies 2. MSc and PhD Electrochemical Technology 3. MSc and PhD Nanotechnology 4. MSc and PhD Corrosion Technology
11	University of Lagos, Akoka https://unilag.edu.ng/	ACE for Drug Research, Herbal Medicine Development and Regulatory Science (ACEDHARS) https://acedhars.unilag.edu.ng/	1. MSc, MPhil and PhD Medical Toxicology 2. MSc MPhil and PhD Pharmacovigilance 3. MSc, MPhil and PhD Regulatory Science 4. MSc Herbal Medicine 5. MSc Drug Development
12	Bayero University, Kano https://www.buk.edu.ng/	Centre for Dryland Agriculture (CDA) https://www.cda-buk.edu.ng/	1. MSc Agricultural Technology
		Centre for Population Health and Policy (ACEPHAP) https://www.acephap.buk.edu.ng/	1. MSc Global Health and Policy 2. MSc Maternal Child Health and Policy 3. MSc Public Health Nutrition and Policy 4. MSc Public Mental Health and Policy 5. MSc Public Health Nursing and Policy

SN	Name of Institution	Centre	List of Programmes
13	Obafemi Awolowo University, Ife https://oauife.edu.ng/	Obafemi Awolowo ICT-Driven Knowledge Park (OAK-Park) http://ace.oauife.edu.ng/	1. MSc and PhD Electrical and Electronics Engineering 2. MSc and PhD Mechanical Engineering 3. MSc Agricultural and Environmental Engineering
14	Federal University of Technology, Minna https://futminna.edu.ng/	Africa Centre of Excellence for Mycotoxin and Food Safety - (ACEMFS) https://acemfs.futminna.edu.ng/index.php/en/	1. Master of Technology in Food Safety 2. PhD in Food Safety 3. Master of Technology in Molecular Biology and Bioinformatics 4. PhD in Molecular Biology and Bioinformatics 5. PhD in Toxicology

Summary of DLI Performance of the Centres (%)

CENTRES	DLI																						
	1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
ACEGID			100		50	88	100		100	100	100	100	100	25	100	100	100	100					100	100
ACENTDFB			100	100	100	100	100		100	100	100	100	100	100	100	100	100		100			100	100	
CERHI		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		100		100	100		100
CDA	100		100		84	100	100		100	100	100	100	100	100	100	100	100		100			100	100	
CEFTER			100		100	100	100		100	35	100	100	100	100	100	100	100		100	100	100	100		100
OAK-Park			87		100	100	100		100	100	100	100	100	100	100	100	100		100		100	100		100
CEFOR			100		100				100			100			100				100					
ACE-PUTOR	100		100		100	100	100		100	100	100	100	100	100	100	100	100				100		100	100
ACEPHAP					26	89	100		100	100	100	100	100	100	100	100	100	100			100		100	100
CApIC-ACE	100		100		99.5				100			100			100				100					
ACETEL	100		87		100	100	100		100	68	100	100	100	100	100	100	100	100			100		100	100
ACEITSE			2		100	99	100		100	60	100	37	100	100	100	100	100		100		100	100		100
ACEMFS			100		100	100	100		100	100	100	100	100	100	100	100	100	100			100			100
ACEDHARS			87		68	100	100		100	100	100	75	25	100	100	100	100		100		100		100	100
ACENPEE	100		100		100	100	100		100	40	100	37	100	100	100	100	100	100			100		100	100
ACE-SPED	100		100		100				100			100			100				100					
ACE-FUELS			87		100	90	90		100	100	100	100	99	100	100	100	100		100		100		100	100

Number of Ph.D. Students Enrolled in Specialized Program

CENTRES	National		Regional		Total
	Male	Female	Male	Female	
ACEGID	9	8	3	2	22
ACENTDFB	25	18	15	5	63
CERHI	34	30	4	4	72
CDA	96	15	9	9	129
CEFTER	53	44	8	5	110
OAK-Park	40	28	12	2	82
CEFOR	99	40	24	5	172
ACE-PUTOR	88	195	44	19	246
ACEPHAP	14	7	0	0	21
CApIC-ACE	6	32	2	3	43
ACETEL	76	10	4	1	91
ACEITSE	25	13	10	2	50
ACEMFS	10	8	5	1	24
ACEDHARS	10	10	2	1	23
ACENPEE	74	6	3	0	83
ACE-SPED	58	8	24	6	96
ACE-FUELS	37	16	6	5	64
TOTAL	754	488	175	70	1441

Number of Master's Students Enrolled in Specialized Program

CENTRES	National		Regional		Total
	Male	Female	Male	Female	
ACEGID	52	50	4	5	111
ACENTDFB	94	31	25	4	154
CERHI	128	149	19	12	308
CDA	285	40	8	6	339
CEFTER	98	52	17	12	179
OAK-Park	88	33	0	0	121
CEFOR	356	137	6	1	500
ACE-PUTOR	27	584	27	25	663
ACEPHAP	119	56	59	28	262
CApIC-ACE	39	68	14	7	128
ACETEL	72	22	33	4	132
ACEITSE	41	37	19	4	101
ACEMFS	45	22	10	2	79
ACEDHARS	60	47	32	12	151
ACENPEE	200	22	36	1	259
ACE-SPED	116	30	28	10	204
ACE-FUELS	57	21	11	0	89
TOTAL	1877	1398	348	133	3,780

Number of Students Enrolled in Professional Short Courses

CENTRES	National		Regional		Total
	Male	Female	Male	Female	
ACEGID	52	50	4	5	111
ACENTDFB	292	125	146	68	631
CERHI	122	170	82	95	469
CDA	867	400	300	200	1767
CEFTER	90	99	72	53	314
OAK-Park	110	87	235	65	497
CEFOR	1466	1542	113	34	3155
ACE-PUTOR	68	304	44	216	632
ACEPHAP	285	140	134	66	625
CApIC-ACE	67	35	129	42	273
ACETEL	256	112	95	44	507
ACEITSE	30	88	83	74	275
ACEMFS	232	574	94	415	1315
ACEDHARS	185	103	161	103	552
ACENPEE	81	51	35	7	174
ACE-SPED	113	18	50	16	197
ACE-FUELS	202	47	76	32	357
TOTAL	4518	3945	1853	1535	11,851

Number of Students Enrolled in Professional Short Courses

CENTRES	National		Regional		Total
	Male	Female	Male	Female	
ACEGID	52	50	4	5	111
ACENTDFB	292	125	146	68	631
CERHI	122	170	82	95	469
CDA	867	400	300	200	1767
CEFTER	90	99	72	53	314
OAK-Park	110	87	235	65	497
CEFOR	1466	1542	113	34	3155
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ACENPEE	81	51	35	7	174
ACE-SPED	113	18	50	16	197
ACE-FUELS	202	47	76	32	357
TOTAL	4518	3945	1853	1535	11,851

Number of Programmes Accredited by National and International Agencies

Centres	National	International	Total
ACEGID	2	2	4
ACENTDFB	2	4	6
CERHI	9	3	12
CDA	8	7	15
CEFTER	5	5	10
OAK-Park	9	3	12
CEFOR	16		**16**
ACE-PUTOR	9	8	17
ACEPHAP	4	2	6
CApIC-ACE	8	2	10
ACETEL	6	6	12
ACEITSE	4		**4**
ACEMFS	6	4	10
ACEDHARS	9	2	11
ACENPEE	8	4	12
ACE-SPED	16	2	18
ACE-FUELS	8	2	10
TOTAL	**129**	**56**	**185**

Number of Students and Faculty Participation in Outreaches/Internships in Relevant Institutions

CENTRES	National		Regional		Total
	Male	Female	Male	Female	
ACEGID					69
ACENTDFB	40	23	43	5	111
CERHI	137	98	23	16	274
CDA	20	70	20	10	120
CEFTER					239
OAK-Park	181	82	12	2	277
CEFOR	190	95	5	1	291
ACE-PUTOR	65	166	23	58	312
ACEPHAP	134	63	59	28	284
CApIC-ACE					168
ACETEL	168	9	13	5	195
ACEITSE	116	50	16	29	211
ACEMFS	55	30	15	3	103
ACEDHARS	5	5	15	4	29
ACENPEE	174	16	28	0	218
ACE-SPED	261	47	18	5	331
ACE-FUELS					16
TOTAL	1546	754	290	166	3248

Summary of Enrolments in Master's, Ph.D., Short Courses and Internships

	Master's				PhD				Short Courses				Internships			Total	
	National		Regional		National		Regional		National		Regional		National	Regional			
CENTRES	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
ACEGID	52	50	4	5	9	8	3	2	52	50	4	5	69	313			
ACENTDFB	94	31	25	4	25	18	15	5	292	125	146	68	40	23	43	5	959
CERHI	128	149	19	12	34	30	4	4	122	170	82	95	137	98	23	16	1123
CDA	285	40	8	6	96	15	9	9	867	400	300	200	20	70	20	10	2355
CEFTER	98	52	17	12	53	44	8	5	90	99	72	53	235	4	842		
OAK-Park	88	33	0	0	40	28	12	2	110	87	235	65	181	82	12	2	977
CEFOR	356	137	6	1	99	40	24	5	1466	1542	113	34	190	95	5	1	4118
ACE-PUTOR	27	584	27	25	88	195	44	19	68	304	44	216	65	166	23	58	1853
ACEPHAP	119	56	59	28	14	7	0	0	285	140	134	66	134	63	59	28	1192
CApIC-ACE	39	68	14	7	6	32	2	3	67	35	129	42	161	7	612		
ACETEL	72	22	33	4	76	10	4	1	256	112	95	44	168	9	13	5	925
ACEITSE	41	37	19	4	25	13	10	2	30	88	83	74	116	50	16	29	637
ACEMFS	45	22	10	2	10	8	5	1	232	574	94	415	55	30	15	3	1521
ACEDHARS	60	47	32	12	10	10	2	1	185	103	161	103	5	5	15	4	755
ACENPEE	200	22	36	1	74	6	3	0	81	51	35	7	174	16	28	0	734
ACE-SPED	116	30	28	10	58	8	24	6	113	18	50	16	261	47	18	5	828
ACE-FUELS	57	21	11	0	37	16	06	05	202	47	76	32	16	526			
TOTAL	1877	1398	348	133	754	488	175	70	4518	3945	1853	1535	1546	754	290	166	20270

Female Enrolment in Programmes of the Centres

CENTRES	**Masters**		PhD		Short Courses		Internships		TOTAL
	National	Regional	National	Regional	National	Regional	National	Regional	
ACEGID	50	5	8	2	50	5	*	*	120
ACENTDFB	31	4	18	5	125	68	23	5	279
CERHI	149	12	30	4	170	95	98	16	574
CDA	40	6	15	9	400	200	70	10	750
CEFTER	52	12	44	5	99	53	*	*	265
OAK-Park	33	0	28	2	87	65	82	2	299
CEFOR	137	1	40	5	1542	34	95	1	1855
ACE-PUTOR	584	25	195	19	304	216	166	58	1567
ACEPHAP	56	28	7	0	140	66	63	28	388
CApIC-ACE	68	7	32	3	35	42	*	*	184
ACETEL	22	4	10	1	112	44	9	5	207
ACEITSE	37	4	13	2	88	74	50	29	297
ACEMFS	22	2	8	1	574	415	30	3	1055
ACEDHARS	47	12	10	1	103	103	5	4	285
ACENPEE	22	1	6	0	51	7	16		103
ACE-SPED	30	10	8	6	18	16	47	5	140
ACE-FUELS	21	0	16	05	47	32	*	*	116
TOTAL	1398	133	488	70	3945	1535	754	166	8484

*Figures provided but not disaggregate

Number of Publications in Peer - Reviewed Journals from the Centers

Centres	Number of Publications
ACEGID	**233**
ACENTDFB	**507**
CERHI	**97**
CDA	**170**
CEFTER	**70**
OAK-Park	**182**
CEFOR	**211**
ACE-PUTOR	**61**
ACEPHAP	**256**
CApIC-ACE	**71**
ACETEL	**62**
ACEITSE	**51**
ACEMFS	**90**
ACEDHARS	**75**
ACENPEE	**52**
ACE-SPED	**202**
ACE-FUELS	**57**
TOTAL	**2447**

National and International Patents Registered by the Centers

CENTRES	Patents	
	National	International
ACEGID		
ACENTDFB	2	11
CERHI	1	
CDA	1	
CEFTER	2	
OAK-Park		
CEFOR	13	
ACE-PUTOR		
ACEPHAP		
CApIC-ACE	20	10
ACETEL	0	0
ACEITSE		
ACEMFS	3	
ACEDHARS	50	25
ACENPEE	2	-
ACE-SPED	2	-
ACE-FUELS	2	
TOTAL	98	47

Partnerships with National and International Organizations

CENTRES	National	International
ACEGID	7	13
ACENTDFB	10	9
CERHI	12	18
CDA	47	20
CEFTER	15	2
OAK-Park	15	6
CEFOR	12	8
ACE-PUTOR	26	8
ACEPHAP	14	23
CApIC-ACE	37	34
ACETEL	17	18
ACEITSE	3	2
ACEMFS	27	20
ACEDHARS	8	4
ACENPEE	52	4
ACE-SPED	34	5
ACE-FUELS	10	15
TOTAL	346	209

Regional Enrolments in Specialized Programmes

CENTRES	Masters		PhD		Short Courses		Internships		TOTAL
	Male	Female	Male	Female	Male	Female	Male	Female	
ACEGID	4	5	3	2	4	5	69		90
ACENTDFB	25	4	15	5	146	68	43	5	201
CERHI	19	12	4	4	82	95	23	16	255
CDA	8	6	9	9	300	200	20	10	562
CEFTER	17	12	8	5	72	53	4		171
OAK-Park	0	0	12	2	235	65	12	2	328
CEFOR	6	1	24	5	113	34	5	1	189
ACE-PUTOR	27	25	44	19	44	216	23	58	446
ACEPHAP	59	28	0	0	134	66	59	28	374
CApIC-ACE	14	7	2	3	129	42	7		204
ACETEL	33	4	4	1	95	44	13	5	199
ACEITSE	19	4	10	2	83	74	16	29	237
ACEMFS	10	2	5	1	94	415	15	3	535
ACEDHARS	32	12	2	1	161	103	15	4	330
ACENPEE	36	1	3	0	35	7	28	0	110
ACE-SPED	28	10	24	6	50	16	18	5	157
ACE-FUELS	11	0	06	05	76	32			130
TOTAL	348	133	175	70	1853	1535	290	166	4518

Summary of Patents, Partnerships, Accreditations and Publications

CENTRES	Patents		Partnerships		Accreditations		Publications
	National	International	National	International	National	International	
ACEGID			7	13	2	2	233
ACENTDFB	2	11	10	9	2	4	507
CERHI	1		12	18	9	3	97
CDA	1		47	20	8	7	170
CEFTER	2		15	2	5	5	70
OAK-Park			15	6	9	3	182
CEFOR	13		12	8	16		211
ACE-PUTOR			26	8	9	8	61
ACEPHAP			14	23	4	2	256
CApIC-ACE	20	10	37	34	8	2	71
ACETEL	0	0	17	18	6	6	62
ACEITSE			3	2	4		51
ACEMFS	3		27	20	6	4	90
ACEDHARS	50	25	8	4	9	2	75
ACENPEE	2	-	52	4	8	4	52
ACE-SPED	2	-	34	5	16	2	202
ACE-FUELS	2		10	15	8	2	57
TOTAL	**98**	**47**	**346**	**209**	**129**	**58**	**2447**

Revenues from the Centres

CENTRES	Revenue ($)	
	Target	**Actual**
ACEGID		*see below
ACENTDFB	1,701,508.54	2,296,954.85
CERHI	629,447	1,625,264
CDA	1,384,877	1,641,133.07
CEFTER	1,774,290	2,363,561
OAK-Park	1,422,000	1,690,581
CEFOR	972,000	1,610,587
ACE-PUTOR	838,000	1,684,945
ACEPHAP	1,365,256	4,883,902.90
CApIC-ACE	883,000	984,214.28
ACETEL	479.142	155,444.82
ACEITSE	454,660	113179
ACEMFS	500,000	477,119.32
ACEDHARS	846,240	633,218
ACENPEE	684,414.00	273,029
ACE-SPED		+see below
ACE-FUELS	955,000.00	696,271.80

***ACEGID REVENUE ($)**	**$**	**£**	€	₦
	6,012,144.17	1,159,835.30	113,992.33	277,901,318.04

+ACE-SPED REVENUE ($)	**Target**	**Actual**	
	$302,038.20	$	₦
		376,128.91	18,965,307.38

Project Costs

CENTRES	Project Cost ($)			
	Original Allocation	Revised Allocation	Total Disbursed	% Disbursed
ACEGID	5,000,000		5,056,167	88%
ACENTDFB	5,000,000	4,752,968	4,746,926	99.9%
CERHI	5,000,000	5,698,702	5,653,172	99.2
CDA	5,000,000	5,691,721	5,259,357.81	92
CEFTER	5,000,000	5,709,280	5,268,913	92
OAK-Park	5,000,000	5,900,000	5,310,000	90
CEFOR	5,000,000	5,337,421	5,337,421	100
ACE-PUTOR	6,000,000	7,149,371	6,374,144.43	89.16
ACEPHAP	6,000,000	6,650,365	5,686,265	86
CApIC-ACE	6,000,000	6,731,743	6,726,982	99.9
ACETEL	5,000,000	6,103,307	5,923,853	97.1
ACEITSE	6,000,000	5,663,728	5,214,844	91
ACEMFS	6,000,000	6,709,622	6,304,576	94
ACEDHARS	6,000,000		5,744,173	88
ACENPEE	6,000,000	5,800,000	4,529,539.59	78.1 %
ACE-SPED	6,000,000	5,560,412	5,560,412	100
ACE-FUELS	6,000,000	5,809,779	5,751,681	99%

Summary of Project Costs and Revenue ($)

CENTRES	Project Cost				Revenues	
	Original Allocation	Revised Allocation	Total Disbursed	% Disbursed	Target	Actual
ACEGID			5,056,167	88		*see below
ACENTDFB	5,000,000	4,752,968	4,746,926	99.9	1,701,508.54	2,296,954.85
CERHI	5,000,000	5,698,702	5,653,172	99.2	629,447	1,625,264
CDA	5,000,000	5,691,721	5,259,357.81	92	1,384,877	1,641,133.07
CEFTER	5,000,000	5,709,280	5,268,913	92	1,774,290	2,363,561
OAK-Park	5,000,000	5,900,000	5,310,000	90	1,422,000	1,690,581
CEFOR	5,000,000	5,337,421	5,337,421	100	972,000	1,610,587
ACE-PUTOR	6,000,000	7,149,371	6,374,144.43	89.16	838,000	1,684,945
ACEPHAP	6,000,000	6,650,365	5,686,265	86	1,365,256	4,883,902.90
CApIC-ACE	6,000,000	6,731,743	6,726,982	99.9	883,000	984,214.28
ACETEL	5,000,000	6,103,307	5,923,853	97.1	479.142	155,444.82
ACEITSE	6,000,000	5,663,728	5,214,844	91	454,660	113179
ACEMFS	6,000,000	6,709,622	6,304,576	94	500,000	477,119.32
ACEDHARS	6,000,000		5,744,173	88	846,240	633,218
ACENPEE	6,000,000	5,800,000	4,529,539.59	78.1	684,414.00	273,029
ACE-SPED	6,000,000	5,560,412	5,560,412	100		+see below
ACE-FUELS	6,000,000	5,809,779	5,751,681	99	955,000	696,271.80

*ACEGID REVENUE ($)	$	£	€	₦
	6,012,144.17	1,159,835.30	113,992.33	277,901,318.04

+ACE-SPED REVENUE ($)	Target	Actual	
	$302,038.20	$	₦
		376,128.91	18,965,307.38

SUMMARIES OF PERFORMANCE OF THE CENTRES

REDEEMERS UNIVERSITY
CENTRE OF EXCELLENCE FOR GENOMICS OF INFECTIOUS DISEASES (ACEGID)

Introduction

Recent advances in genomic technologies for studying humans and microbes have the potential to transform clinical care, understanding of infectious diseases, improve disease surveillance, and prevent outbreaks. Knowledge of genomics and new technologies evolving from it have benefited mainly countries of the global North, Australia and Asia. These have increased the divide between institutions and laboratories in Africa as a region and Nigeria as a country. As a result of this, many African researchers and academic institutions are unable to effectively contribute to solutions concerning the control, eradication, or elimination of major diseases that are associated with poverty and under-development. The lack of skilled human resources affects the capacity of institutions in Africa to provide innovative approaches to addressing health challenges in most of the continent.

Objectives

The Centre of Excellence for Genomics of Infectious Diseases (ACEGID) was established with the mission to develop Africa's research capacity in genomics by building a critical mass of well-trained scientists. The aim was to empower African researchers to optimally utilise genomics knowledge and tools to create new knowledge for control and elimination of infectious diseases. Furthermore, it would work on the development of genomics curricula to support and promote cutting-edge genomics-based research for health advancement, leading to the creation of a vibrant academic and research environment that transcends national boundaries and ensuring the conduct of relevant, responsive and high-quality translational genomics-based research on health in Africa.

Summary of Implementation Performance

DESCRIPTION (Enrolment)	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in PhD	29	13	9	5	9	8	3	2
Master's Programmes	49	25	24	12	52	50	4	5
Short Courses	100	80	62	33	168	110	105	57
Internships	71				69			

DESCRIPTION	NATIONAL	INTERNATIONAL
Patents	NA	NA
Partnerships	7	13
Accreditations	2	2
No. of Publications (journals, etc)	233	

REVENUE ($)	$	£	€	₦
	6,012,144.17	1,159,835.30	113,992.33	277,901,318.04

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
			5,056,167	88%

DLI PERFORMANCE (%)

DLI (%)																						
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		100		50	88	100		100	100	100	100	100	25	100	100	100	100					100	100

The work of the Centre made positive impact on the production of high-quality translational genomics-based research in Africa, with the development of new tools and countermeasures for wide-ranging public health challenges, including Ebola virus disease, Lassa fever virus and Mpox virus outbreaks in West Africa. ACEGID's academic and training programmes support the building capacity for state-of-the-art genome sequencing as well as field-deployable genetic tools for microbial infection in Africa. This supports clinical diagnostics that could be provided in time to save lives in West Africa.

In 2014, during the Ebola outbreak in West Africa, ACEGID championed genomic surveillance for public health response in Nigeria and Sierra Leone. With this novel approach, it contributed tremendously to the successful containment of the Ebola outbreak in Nigeria. Through clinical metagenomic studies, two new rhabdoviruses (EKV-1 and EKV-2) were discovered in 2015, and in 2021, the first Rabbit Hemorrhagic Disease Virus genome in Sub-Saharan Africa was uncovered as well as African Swine fever (ASF) in 2022. Most recently, during the COVID-19 pandemic, ACEGID performed the first reported genomic sequencing of the SARS-CoV-2 in Africa. It also sequenced Mpox genomes from Nigeria, Cameroon, DRC, Congo Republic and Central African Republic (CAR) (all endemic for Mpox) in order to understand the circulating strain of the virus, relatedness and transmission dynamics.

ACEGID is leading the Sentinel project-an early warning system for pandemics preemption, which uniquely harnesses and synergises the power of cutting-edge genomic tools and contemporary information technology to detect viral threats in real time, and quickens public health actors in the continent to prompt action.

The provision of on-site diagnosis at the Centre allowed the analyses of valuable patient samples in greater depth, leading to better documentation of current diseases as well as characterisation of previously unknown causes of febrile illness in these populations. This enabled a surveillance network for early disease outbreak detection, as well as for some of the world's greatest global health threats.

The Centre continues to offer opportunities for research and clinical scientists to fulfill the vision of using genomics to diagnose fever of unknown origin (FUO) immediately and to further pursue tractable and important projects in infectious disease and genomic research in their home countries. This combination of new perspectives and new technologies under ACEGID (through long and short-term trainings and short courses, as well as deep infrastructural investment) has made tremendous impact on the way the next generation of trained African researchers perform science on the continent. Overall, ACEGID, through these south-south and north-south partnerships, has demonstrated its ability to promote:

1. research capacity through long and short-term training of scholars and infrastructure development in the participating West African institutions;
2. research innovation and discovery for health development in the West African region;

3. multi-centre development and evaluation of research concepts;
4. international and regional collaboration and integration;
5. applications of acquired and indigenous knowledge to find solutions to infectious diseases afflicting West Africa; and
6. exposure of scholars to regional challenges and strategies for overcoming them.

ACEGID continues to work on scaling up its trainings and outreach programmes for more impact, by building the capacity of public health institutions in West African countries in using cutting-edge scientific approaches to find solutions for infectious diseases diagnosis, management, outbreak preparedness, and response. This is because continued development of local genomics capacity and growth in academic and public health institutions across the West African sub-region will facilitate a more agile and integrated approach to outbreak responses. It envisions a model for genomics-informed outbreak investigation in which locally generated sequence data is rapidly integrated with traditional epidemiological data to refine response strategies.

The research programmmes of the Centre have informed policy for public health. During the COVID-19 pandemic, its sequencing outcome and interpretation were communicated to the Federal Government in Nigeria for necessary action. The relationship with the Federal Ministry of Health and the National Centre for Disease Control (NCDC) ensure that research outcome is shared for public health decision and action; the Yellow Fever 2018 outbreak being a key example.

In its drive to bring its research and training programmes nearer to the population, the Centre has field sites in:

1. Abakaliki, Ebonyi State;
2. Ikorodu, Lagos State;
3. Irrua, Edo State; and
4. Owo, Ondo State

The impact of ACEGID has been recognised by different agencies globally, and has led to the designation of ACEGID as a reference laboratory for storage and analysis of emerging and re-emerging pathogens by the World Health Organisation (WHO) and African CDC.

ACEGID has leveraged its successes to apply for additional funding, and has successfully attracted grants and expanded the scope of research from human pathogens to zoonoses and even non-communicable diseases. As of 2024, there were four additional centres namely Centre for Malaria Research, Centre for Data Sciences, Centre for Human Genomics Research and Centre for One Health Research.

Recognising the vast potential of genomics beyond infectious diseases, ACEGID evolved into the **Institute of Genomics and Global Health (IGH)** on 7 **October 2024**. This transition marked a significant milestone, broadening its mission to include research and innovation in precision medicine, biotechnology, and non-communicable diseases such as cancer and cardiovascular conditions. ACEGID is, therefore, now under the big umbrella of the Institute of Genomics and Global Health (IGH). It is an assurance of the sustainability of its excellent activities.

IGH serves as a multidisciplinary hub for cutting-edge genomics research, integrating data science and bioinformatics to accelerate scientific breakthroughs. While ACEGID continues its critical work as one of five specialised centres within IGH, the Institute expands its efforts to develop diagnostics, therapeutics, and preventive solutions that address a wider range of health challenges.

IGH, in collaboration with Alex Ekwueme Federal University Teaching Hospital Abakaliki (AEFUTHA), the Federal Ministry of Health and Social Welfare, the Ebonyi State Government, and Sentinel Funders commissioned the Amaewhule Cottage Hospital in Ebonyi State. This is part of its commitment to bringing healthcare to hard-to-reach communities. The Institute led the construction and equipping of the facility with modern diagnostic and clinical equipment.

The hospital is equipped with ultrasound scanners, Echocardiography machines (ECG), patient ambulatory monitors, labour and delivery suites, ophthalmologic equipment, 24-hour solar power supply, and residential quarters for health workers to ensure seamless operations and patient care.

This project also aims to strengthen research, capacity building, and public-private partnerships in the fight against infectious diseases.

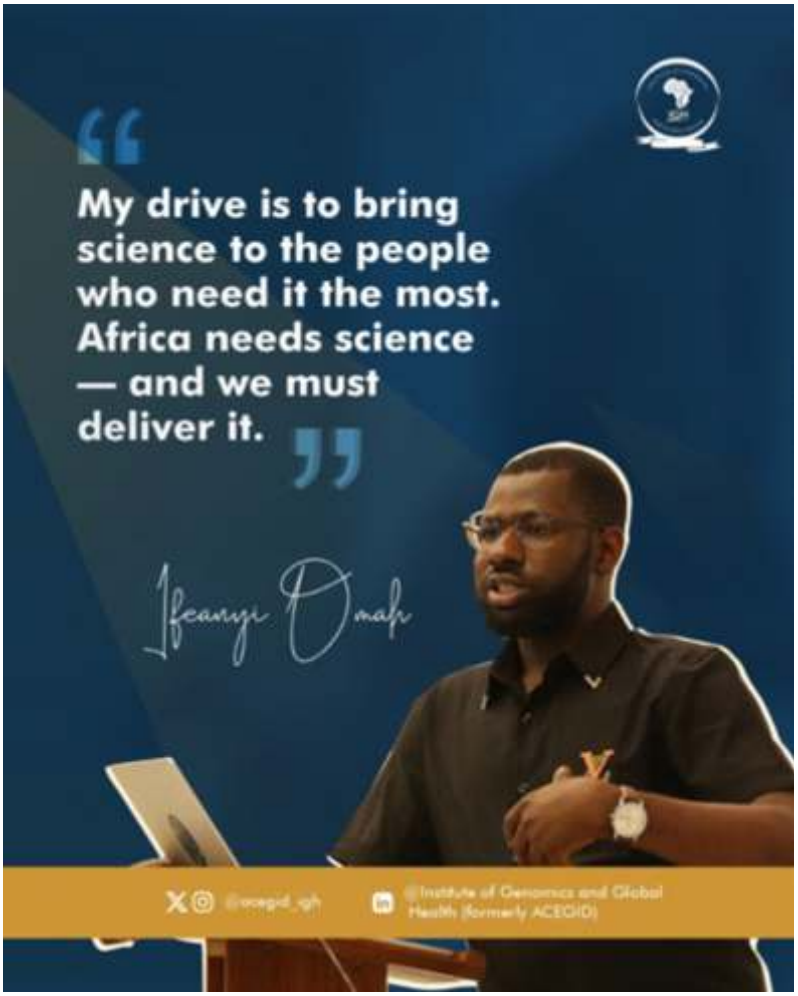
Professor Christian Happi is the Director of ACEGID and has been globally recognised for leadership in Genomics research and capacity in Africa. He has received several awards such as the HUGO award, Bailey K. Ashford award, Africa Hero for Infectious Diseases Awards and many more. In April 2024, Professor Happi was named one of TIME's 100 Most Influential People of 2025. He is a Fellow of the National Academy of Medicine and, National Academy of Sciences. He holds a Hallmarks of Labour Foundation role model award for outstanding contributions in the field of science and is a Distinguished Professor in Redeemer's University.



PROFESSOR CHRISTIAN HAPPI
DIRECTOR, ACEGID – TIME MAGAZINE 100 - 2025



Commissioning of the Amaewhule Cottage Hospital in Ebonyi State



Hosting the Social-Ecological Network Approach to Understanding Zoonotic Outbreak Risk (SENZOR) in 2024

The institute hosted SENZOR which brought together international collaborators from the Robert Koch Institute (RKI), Germany, the Medical Research Council (MRC) Unit of The Gambia, the London School of Hygiene and Tropical Medicine (LSHTM), and other key stakeholders to evaluate progress and make plans for the next phase of the project.

SENZOR, funded by the Volkswagen Foundation, is a multidisciplinary research project launched in 2022 to tackle the rising risks of zoonotic diseases. This follows the backdrop of COVID-19 and the potential consequences of climate change. It combines molecular biology, ecology, and anthropology to understand how human-animal interactions, shaped by environmental and social factors, influence pathogen transmission.



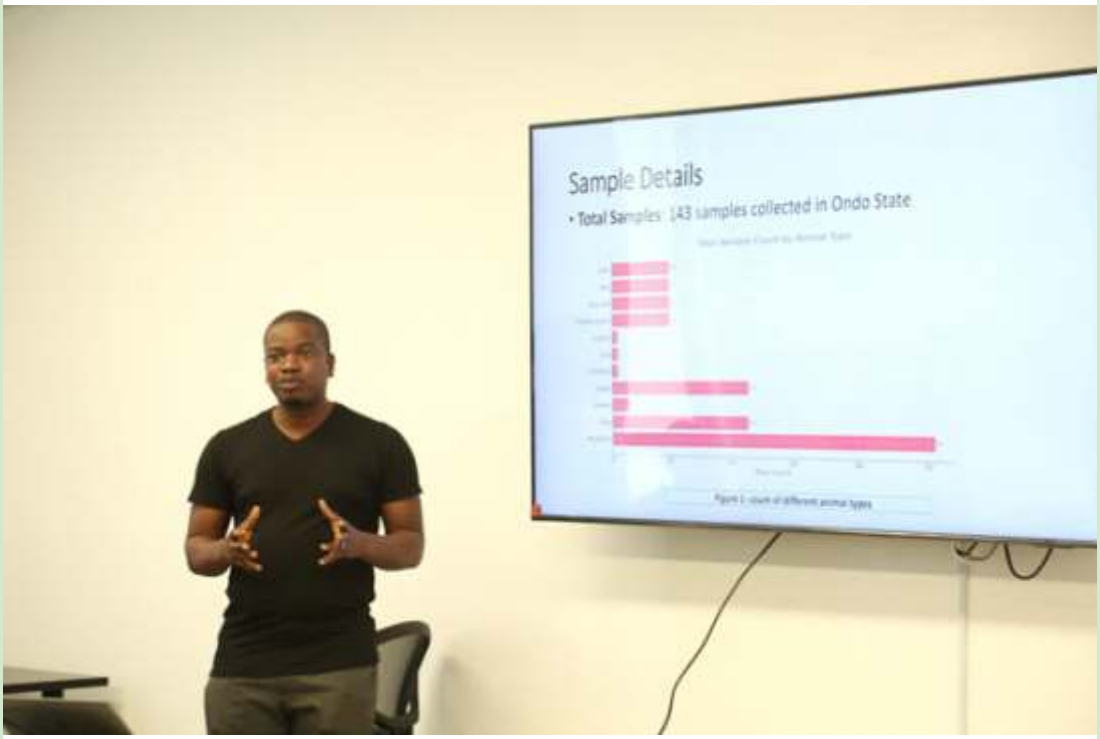



SENZOR structure and timeline
Field sampling and ecological survey
Metagenomic survey
Broad social science


Generator Emissions


4.1.3 Chapter 1 (cont'd)




Sample Details
• Total Samples: 143 samples collected in Onda State

GALLERY OF FACILITIES AND ACTIVITIES










ACE IMPACT


ACE IMPACT


BRANSON
5200
ACE IMPACT


ACE IMPACT

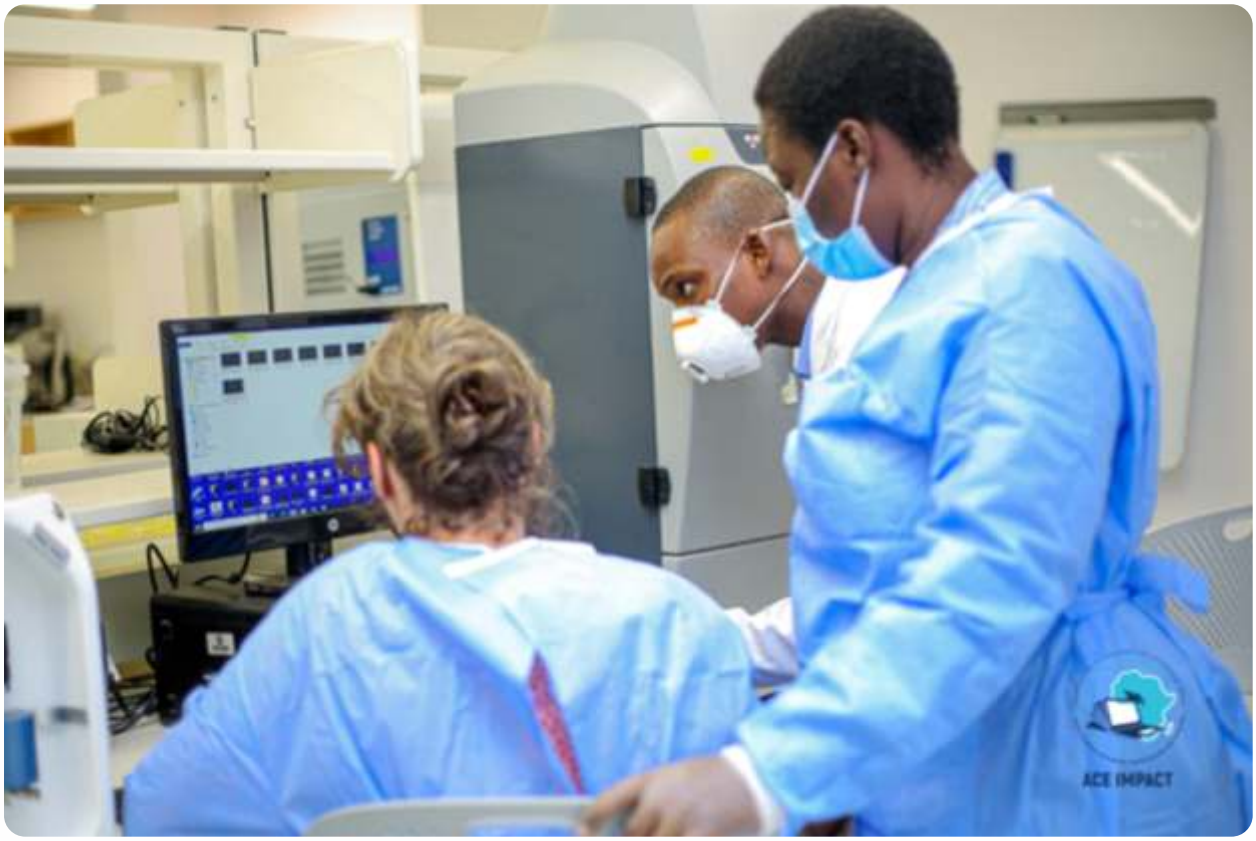

Luminex
ACE IMPACT


Luminex














eppendorf
ACE IMPACT




Illumina
ACE IMPACT


MiSeq
illumina




ACE IMPACT




applied
biosystems
ACEIMPACT


SEQUEL IIe
ACE IMPACT

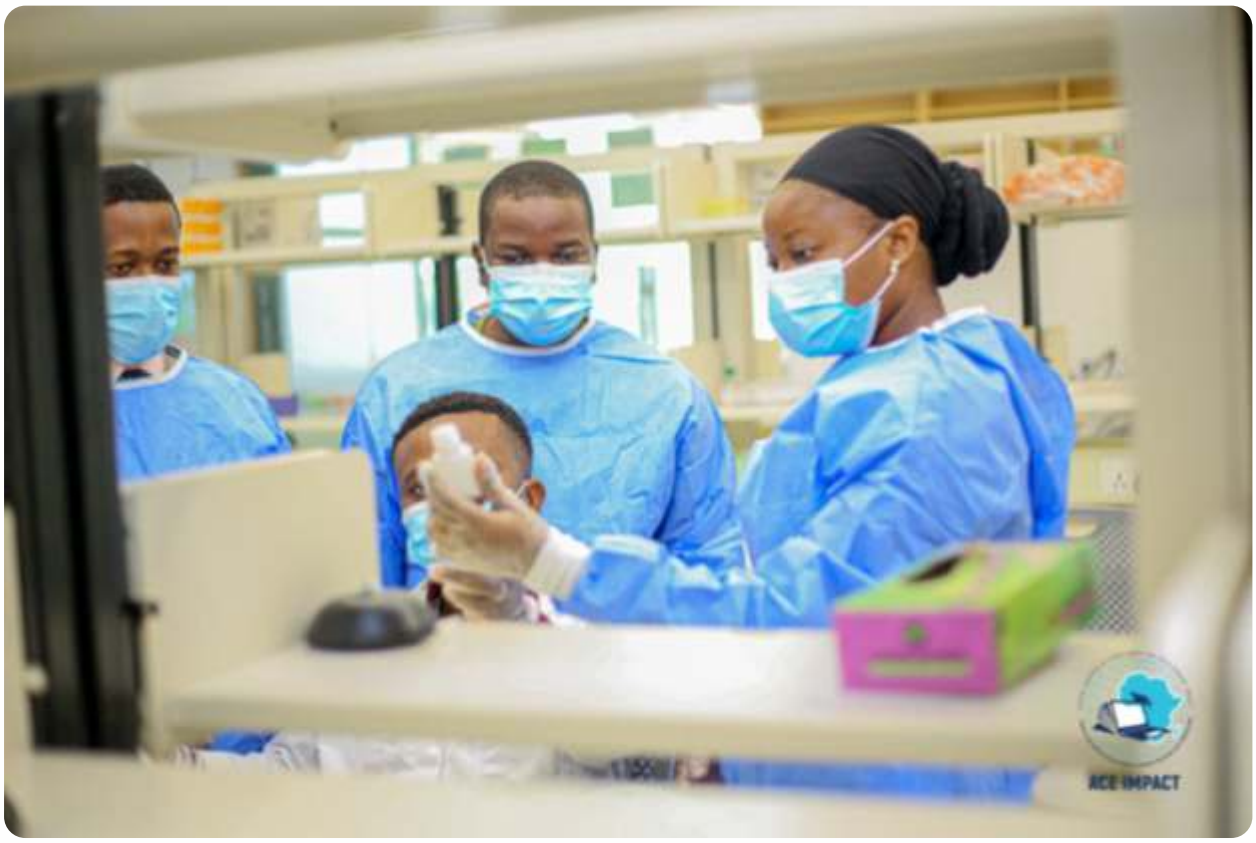

FLUIDIGM
ACE IMPACT




ACE IMPACT


eppendorf
Concentrator plus
ACE IMPACT


ACE IMPACT


ACE IMPACT

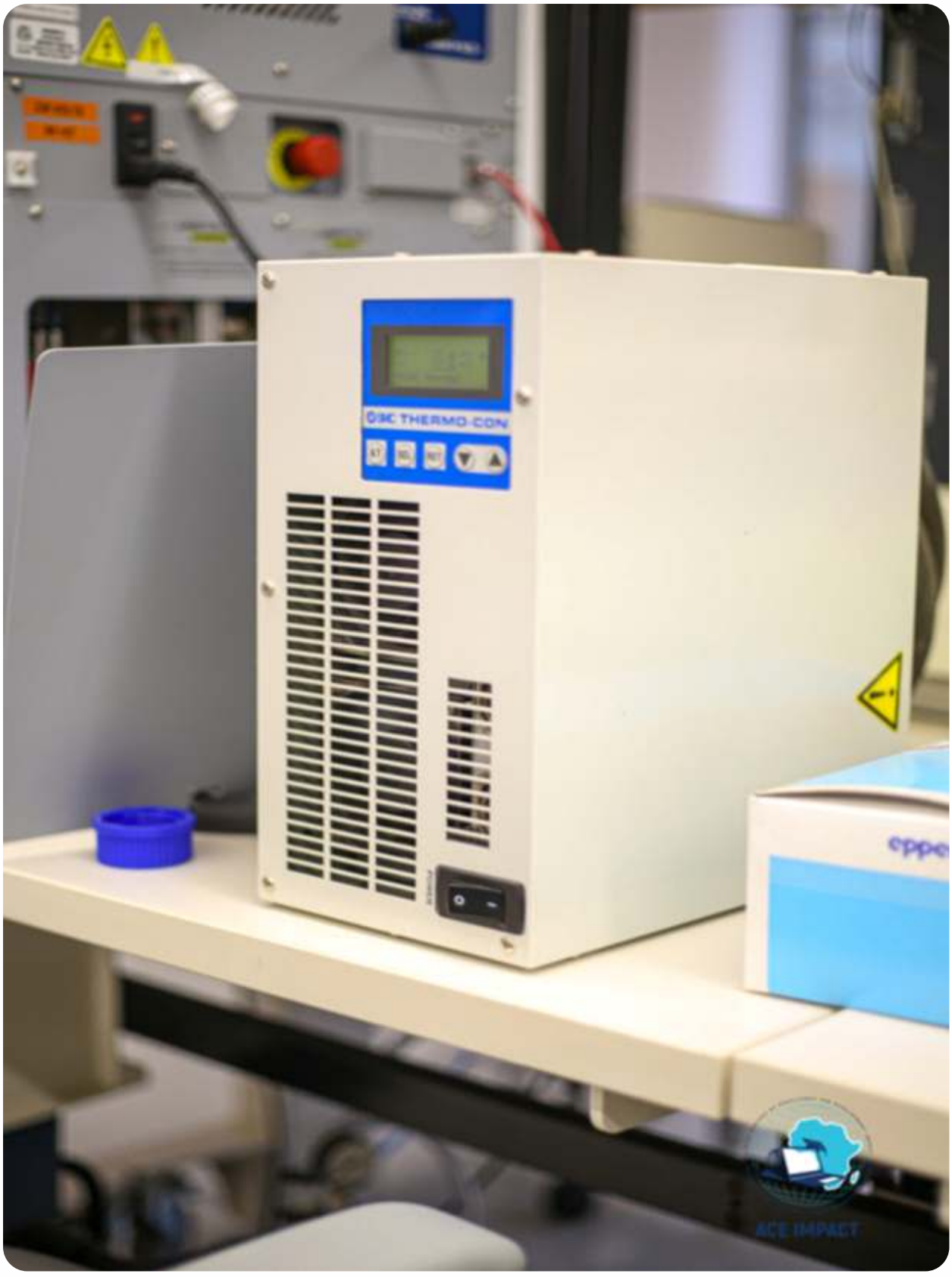


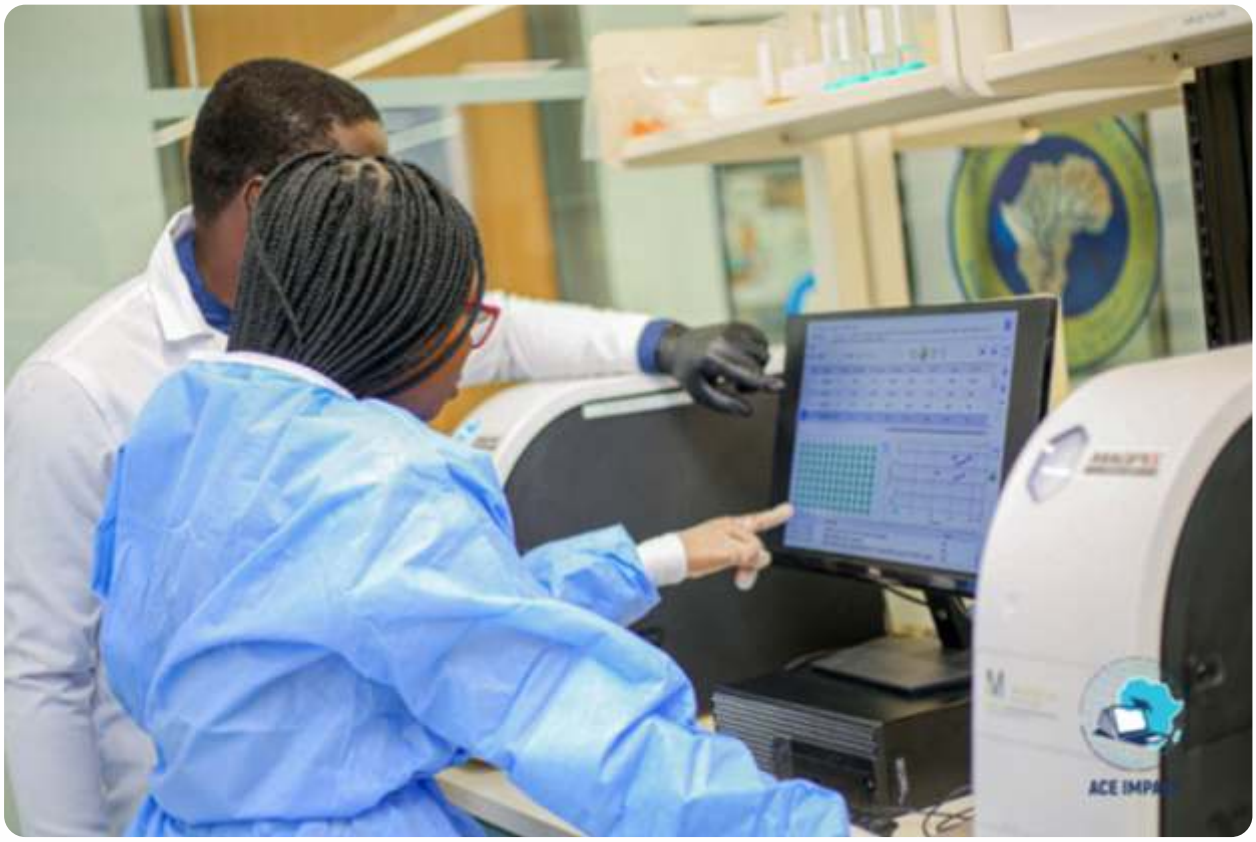

XMAP
XMAP


ACE IMPACT


DO NOT MOVE OR SHIFT
WOLF
Cell Sorter
nanoDrop
WOLF
10X CONSUMABLES
10X CONSUMABLES
ACE IMPACT


LABCYTE
Echo 525
ACE IMPACT


OSC THERMO-CON



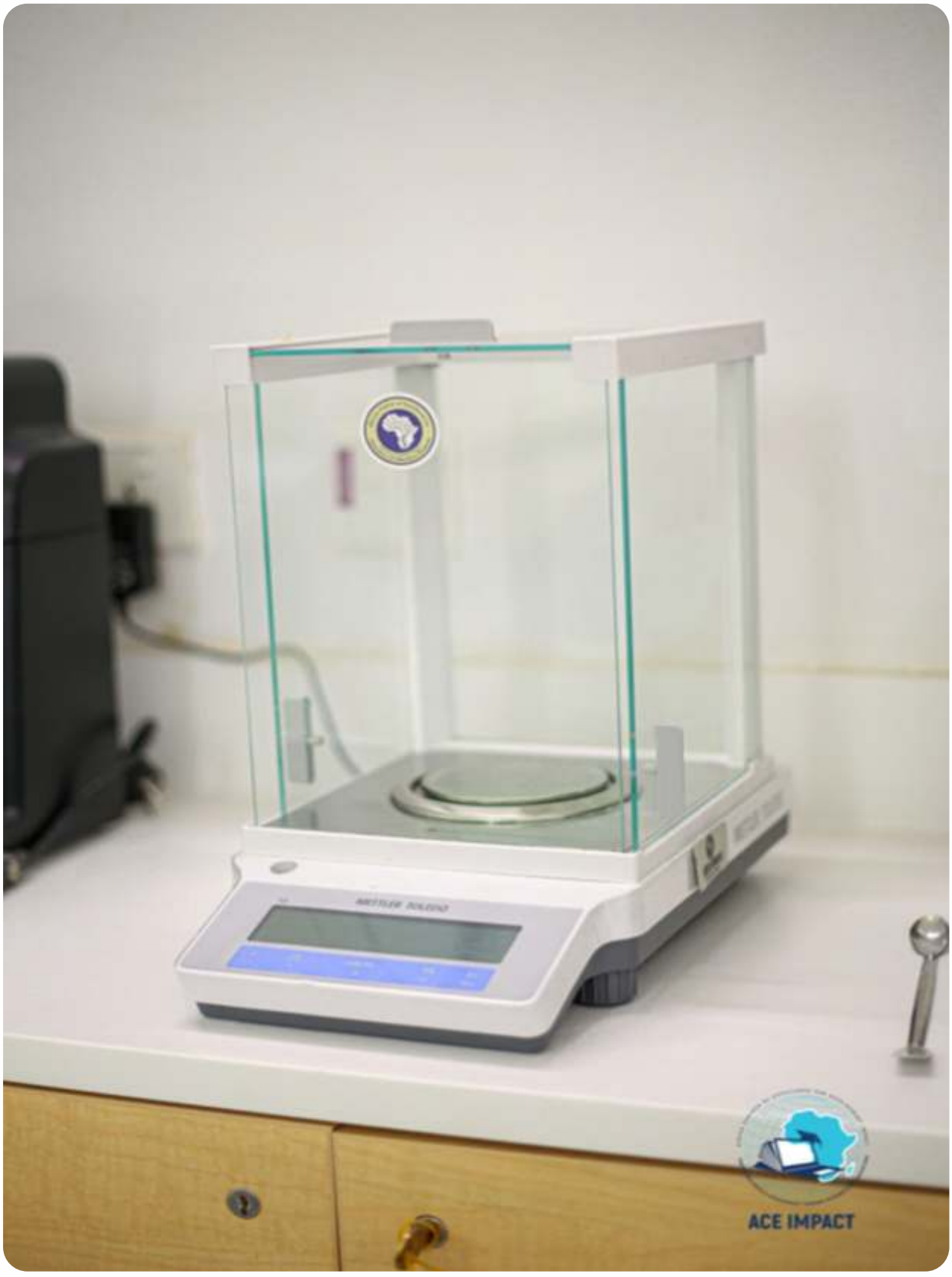

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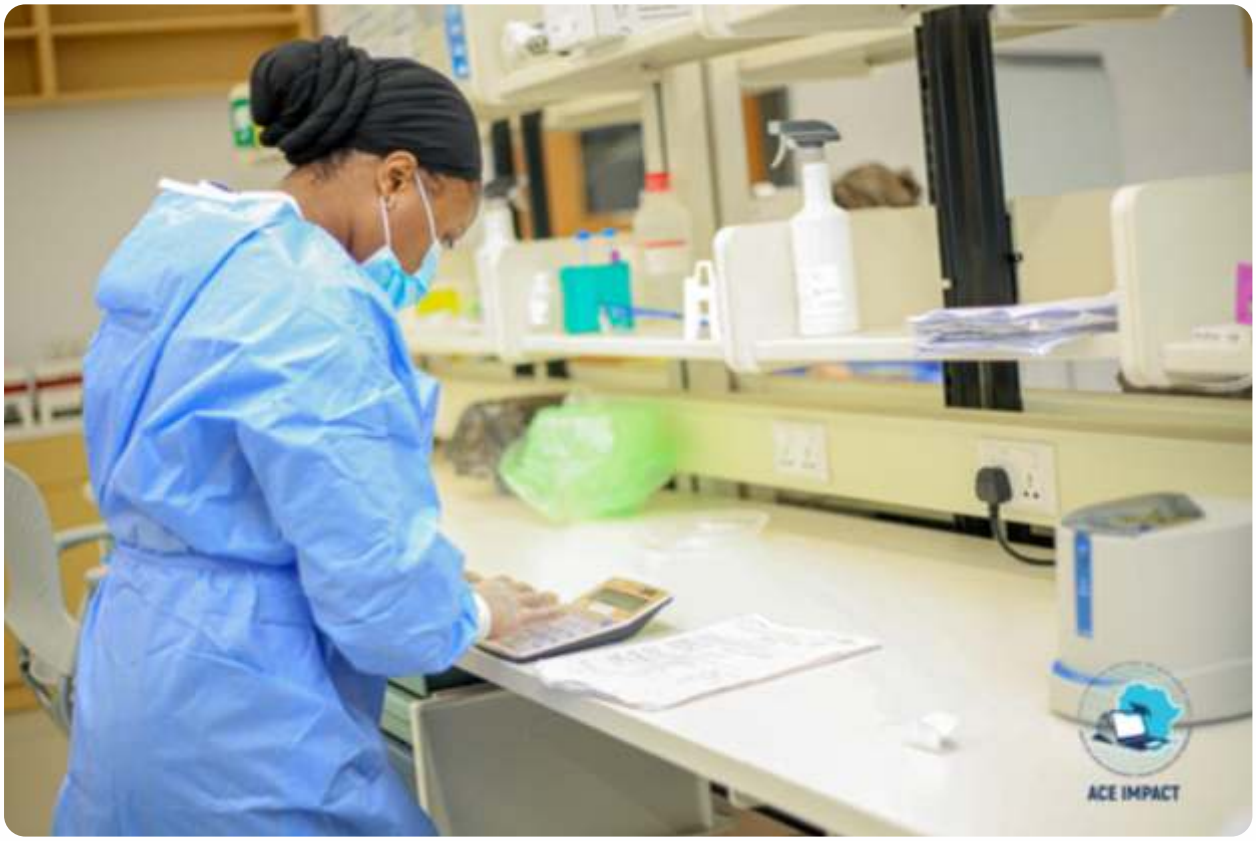

ENDURO™ GDS
TOUCH
Labnet
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ACE IMPACT


ENDURO™ GDS
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Pipeline
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AHMADU BELLO UNIVERSITY

CENTRE OF EXCELLENCE FOR NEGLECTED TROPICAL DISEASES AND FORENSIC BIOTECHNOLOGY (ACENTDFB)

Introduction

Africa bears 24% of the global burden of diseases but accounts for less than 3% of the global health force and less than 1% of the world's financial resources. A high number of these diseases termed Neglected Tropical Diseases (NTDs) affect predominantly rural communities. They constitute not only a health issue but also significantly worsen poverty levels (decreased food and animal outputs) with attendant social implications. NTDs continue to adversely challenge the development of Africa due to the persistence of factors that mitigate their control/eradication. In Nigeria, for example, over 100 million people, nearly half of the estimated population, are at risk of NTDs.

Objectives

The Centre of Excellence for Neglected Tropical Diseases and Forensic Biotechnology (ACENTDFB) was established with the aim of being at the forefront of addressing the challenge of NTDs in Nigeria and other parts of the developing world. In addition of human capacity development, the Centre prioritises the drive for molecular research and innovations on novel standardised molecular diagnostic tools for the characterisation of these parasites in their natural habitats. These would be used to map the burden and distribution of the pathogens in the region; developing and maintaining pathogen sample and strain repositories; developing facility for innovative vaccination approaches on animals of economic relevance and many more

Summary of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in PhD	30	15	10	5	25	18	15	5
Enrolment in Master's Programmes	75	25	10	5	94	31	25	4
Enrolment in Short Courses	200	100	100	50	292	125	146	68
Internships	70	30	10	5	40	23	43	5

DESCRIPTION	NATIONAL	INTERNATIONAL
Patents	2	11
Partnerships	10	9
Accreditations	2	4
No. of Publications (journals, etc)	507	
	Target	**Actual**
REVENUE ($)	**1,701,508.54**	**2,296,954.85**

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	5,000,000	**4,752,968**	**4,746,926**	**99.9%**

DLI PERFORMANCE (%)

DLI (%)																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		100	100	100	100	100		100	100	100	100	100	100	100	100	100		100			100	100	

The Centre, through its work, has gained the confidence of the local and wider community. Its laboratory facilities served as testing centres during the COVID-19 pandemic, playing significant roles in tackling the challenges posed by the disease. Results of its work on NTDs are gradually being integrated into the wider health sector for the benefit of the communities. This has led to greater collaboration with government and non-government organisations, thereby enhancing ACENTDFB's sustainability. Its academic programmes as well as short courses aimed at capacity strengthening are also supporting local and regional institutions and organisations in manpower/skills development. Learning management system were developed to support efficient access to information within the university community.

ACENTDFB has been dedicated to conducting high-impact research and training aimed at the developing a critical mass of skilled manpower. It leverages its state-of-the-art facilities, equipment and wide network to produce impact-oriented interventions that would significantly reduce the morbidity, mortality and socio-economic burden of the six diseases on the continent and competent forensic scientists. The ACENTDFB education programme is based on modular structured programmes with vastly improved methods to educate heterogeneous groups of participants, promote independent interdisciplinary research, skilled scientific presentation and general communication. The Centre vigorously pursues competitive research grants, collaborations with strategic partners and international accreditation. This is to achieve the highest standards of academic excellence and the flexibility required to meet the needs of postgraduate students from universities as well as from the public (e.g. research institutes, hospitals, police) and private (e.g. small and medium-size enterprises) sectors. ACENTDFB's applied research activities seek to establish extensive regional disease/pathogen/vector surveillance, advanced capacity for culturing organisms for infectivity, transmission, immunologic and drug sensitivity studies, bio-resource cryobank/preservation and storage for different microbial species, genes and related biological products, and characterisation of products from natural and synthetic sources.

The Centre augments its capacity with extensive advocacy and enlightenment on its mandate. Its existing and new collaborating partners were rigorously selected to contribute to the successes already achieved and the attainment of the Centre's overall goals in the short and sustainable long-term. They were integrated into the management structure with the creation of advisory boards. Tested metrics were used to assess the performance level in addressing the objectives of the Centre.

The Centre built substantial human resources and capacities in the epidemiological mapping and control of NTDs, developed policies and strategies including development of therapeutic agents (drugs and vaccines) for the management and control of NTDs and its scourges. In addition, relevant structures and instruments addressing forensic issues were established.

The research programmes of the Centre are in four thematic areas:

1. Viral Diseases (Dengue and Rabies)

Two significant neglected viral diseases with high morbidity and mortality in Nigeria, namely rabies and dengue form part of this thematic area. Rabies is endemic in Nigeria, but despite previous efforts, an estimated 10,000 cases are reported in the country annually, one of the highest rates globally. Dengue is emerging and appears to be prevalent in the country, but there has been a dearth of information on its rate of occurrence. Thus, there is a need to carry out surveillance of the occurrence of the virus in mosquito vectors and humans.

2. Lymphatic Filariasis/ Onchocerciasis/ Schistosomiasis/ Soil Transmitted Helminths (STHs) / Trachoma

The major research focus by the group includes but is not limited to the following:
Application and standardisation of environmental DNA (eDNA) surveillance tools for xenomonitoring of *Schistosoma* species. The major scope includes but is not limited to the following:

i. Application and standardisation of environmental DNA (eDNA) surveillance tools for xenomonitoring of *Schistosoma* species and snails intermediate hosts
ii. Female genital schistosomiasis (FGS), Male genital schistosomiasis (MGS) and cancer
iii. Drug resistance in filarial (*Wuchereria bancrofti, Onchocerca volvulus, Onchocerca Ochangi*), *Schistosoma haematobium, Schistosoma bovis,* Soil Transmitted Helminths (STHs) and *Chlymadia trachomatis*
iv. Mechanisms of insecticide/pesticide resistance in vectors/intermediate hosts of NTDs pathogens
v. Filarial co-infections with other pathogens
vi. Bioprospection of control agents against NTD infectious pathogens
vii. Surveillance, epidemiological and control studies of filarial and related zoonotic pathogens
viii. Endosymbionts-vector-pathogens interrelationships

3. Trypanosomiasis

The major focus of research in this thematic area includes:

i. Gene and protein expression studies
ii. Molecular characterisation of trypanosome species
iii. Molecular characterisation of endosymbionts in *Glossina* species
iv. Molecular detection of tsetse endosymbionts
v. Epidemiology of trypanosomiasis
vi. Enhancing fly refractoriness to trypanosome infection
vii. Studies on key parasite genes for development of candidate naked DNA vaccine

viii. Establishment of a system for the production of trypanosomal enzymes and development of their inhibitors for drug design
ix. Developing new treatments for animal and human trypanosomiases, including exploring combinations of existing drugs, repurposing approved medications, and developing entirely new drugs and investigating the mechanisms of drug resistance and strategies to overcome them
x. Use of mathematical models to analyse epidemiological parameters and identify factors that influence the emergence and spread of trypanosomiasis
xi. Development and improving vector control methods, such as new insecticide-treated nets and other technologies to reduce tsetse fly populations and prevent transmission of trypanosomes
xii. Studies on molecular interactions between trypanosomes and tsetse flies, including the role of tsetse fly endosymbionts and their impact on parasite transmission and development.

4. Forensics

This thematic area focuses on advancing the application of forensic science in the investigation and resolution of criminal and civil cases in Nigeria and the region. Key research interests include:

i. Development and validation of modern forensic DNA analysis techniques for human identification and kinship testing.
ii. Application of forensic entomology and botany in post-mortem interval estimation.
iii. Use of forensic chemistry and toxicology to detect and quantify drugs, poisons, and other chemical substances in biological samples.
iv. Forensic document examination and handwriting analysis.
v. Digital forensics, focusing on retrieval and analysis of electronic data for use in legal proceedings.
vi. Capacity building in forensic science through training and collaboration with law enforcement agencies.
vii. Development of standards and best practices for forensic laboratories in line with international guidelines.

SELECTION OF GRANTS AND AWARDS

S/NO	TITLE OF GRANT	DESCRIPTION
1	Two National Research Fund Grants	Grants of $200,000 (2021-2023) to Prof. Y.K.E. Ibrahim and Prof. M. Mamman The first grant was awarded for a research project titled "Antimicrobial Nano-reinforced Bacterial Cellulose Hydrogel (BCH) from Agro Residues– Production and Application in Wound Healing". The research team headed by Prof YKE Ibrahim had five other professors, and five students (1 PhD and 4 MSc). The research project resulted in the whole genome sequencing of a BCH producing *Gluconacetobacter orientalis* isolated from pineapple and its deposition in the GenBank. At the end of the project, 3 MSc and 1 PhD students were graduated. A patent was obtained from the German Patent Office in 2024 for the development of BCH production from G. orientalis (Patent No: 20 2024 102 959). The second grant awarded to Prof. M. Mamman and his co-workers titled "DNA and Protein Subunit Vaccines Development against African Animal Trypanosomiasis: Targeting Genes Encoding Essential Surface and Non-variable Proteins". The research was designed to produce DNA vaccines targeting multiple essential proteins of African trypanosomes namely, membrane bound acid phosphatase (MBAP), membrane surface protein (MSP), trans-sialidase (TS) and glycerol kinase (GK). The first three proteins are on the parasite surface and are

		responsible for control of antigenic variation/VSG, development/differentiation, and pathology, respectively, while GK is intracellular and needed for energy production. At its completion, the research produced 4 (four) PhD graduates and findings were presented at international scientific meetings and published in scopus-indexed journals.
2	Chan Zuckerberg Initiative Grant	Grant of $818,776 to Dr Idowu A. Aimola (2022-2025)
3	African Postdoctoral Training Initiative Grant	Grant of $626,000 to Dr Idowu A. Aimola (2020-2023)
4	NIH K43 Grant	Grant of $576,000 to Dr Emmanuel O. Balogun (2019-2023)
5	IFAD Grant	Grant of $90,000 to 2 ACENTDFB PhD students (WANIDA) i.e. Peter Mahbou Yunenui and Yusuf Mfopit Moulloum who completed their programme
6	ERASMUS Mobility Plus to University of Bremen	9 students sponsored for Bench Work ($7,000.00)
7	ARISE-PP Grant	Grant of $205,000 to Dr Emmanuel Amlabu (2023)
8	European & Developing Countries Clinical Trials Partnership (EDCTP3)	Grant of €5m to Dr Gloria D. Chechet (2025)



DR. GLORIA CHECHET AND TWO OTHERS CLINCH €5M EDCTP[3] GRANT

Dr Gloria Chechet, one of the researchers at the Centre, was named the Scientific Project Leader for the Multiplex AI. This was funded by the European & Developing Countries Clinical Trials Partnership (EDCTP3) with grant of €5 million. The Project is titled "The Intelligent Autonomous Microscope: an AI Platform for Multiplex Parasite Diagnosis at the Point-of-Care". The project, with a 48-month span, is an innovative approach which transformed conventional microscopes into smart, AI-driven diagnostic tools capable of detecting and quantifying multiple parasitic infections in a single sample. This is achieved through the integration of deep learning, mobile-based microscopy, and real-time image processing, ensuring high diagnostic accuracy even in resource-limited settings.

The project brings together an international consortium of experts with Quique Bassat as Project Leader from ISGlobal in Barcelona, Spain. Miguel Luengo from SpotLab, also in Spain is the Co-ordinator.



DR. EMMANUEL AMLABU – ARISE GRANT WINNER

Dr Emmanuel Amlabu, a visiting scientist and researcher at the Centre, won a grant of $205,000 from the African Research Initiative for Scientific Excellence-Pilot Program (ARISE-PP). This was funded by the European Union and implemented by the African Academy of Sciences (AAS) with support from the European Commission and the African Union Commission. The grant is for the development of novel antimalarial therapeutics targeting Plasmodium falciparum lipid-binding proteins. The Project, which is hosted by the Centre, was designed to benefit from the track record of ACENTDFB on tropical disease research and its robust grant management system. The Project was expected to recruit and graduate three MSc and two PhD students drawn from Prince Abubakar Audu University, Ayingba, and Ahmadu Bello University, Zaria. Additionally, it will provide opportunities for junior researchers in the institutions to upscale their research capacities.

Dr Amlabu is a staff of the Prince Abubakar Audu University, Ayingba and Leader of the Malaria Research Group of the Genomic Molecular Biotechnology Research and Training Laboratory (GMBRTL) of the University. He was a WACCBIP-DELTAS fellow at the West African Centre for Cell Biology and Infectious Pathogens (WACCBIP), University of Ghana. At the terminal phase of the Project, he became a Crick African Network (CAN) Fellow at WACCBIP-UG and the Francis Crick Institute, UK. During his research, he profiled a pipeline of merzoite proteins vaccine development and precise drug targeting. His work on understanding molecular biology of malaria parasite invasion of human red blood cells has attracted awards from the National Universities Commission (NUC) and the Committee of Vice-Chancellors of Nigerian Universities (CVCNU).

DLR 2.2

ACENTDFB

AFRICA CENTRE OF EXCELLENCE FOR NEGLECTED TROPICAL DISEASES AND FORENSIC BIOTECHNOLOGY

SCORE 4/5

OVERALL ASSESSMENT

The evaluators find that the ACE has demonstrated significant impact in all three domains, with multiple examples that impact has been realised. Additionally, the development impact seems to be a part of the governance, culture and structures of the centre and is likely to continue in the future.

SECTOR

Sub-assessment: The centers collaborates with a couple of private sector actors and has been involved in training and research projects. However, the response rate to the survey was relatively low and the responses lower than average. The evaluators feel that there is evidence for impact, but that there is still work to be done to increase and broaden this impact. 3/5

- The centre has is a technology seed grant scheme to support the establishment of start-ups and spin-offs
- The outreach processes to sectoral stakeholders are well embedded in management and governance.
- The centre has intensive collaborations with (at least) six private institutions.

RESEARCH

Sub-assessment: The research the centre is doing is relevant and impressive, multiple students have received awards for research findings and publications. The centre has good structures in place to safeguard the quality of research, through a quality monitoring system and support for research in conducting research and publishing. 4/5

- ACENTDFB focuses on thematic research areas including African trypanosomiasis, filariasis, onchocerciasis, rabies, dengue, and chlamydiosis.
- The centre has a successful patenting strategy, that has resulted in a high number of patents.

SOCIETY

Sub-assessment: The centre explains a variety of ways they engage the local and regional community and contribute to resolving local and regional issues and works with a variety of local, state and federal governments to achieve feedback. 4/5

- The research the centre is doing is contributing to reducing the disease burden.
- The centre played an important role in the COVID-19 response through the creation of a testing facility and providing expert advice in the design and construction of laboratories to the State for the state COVID-19 lab.

DLR 2.2

ACENTDFB

AFRICA CENTRE OF EXCELLENCE FOR NEGLECTED TROPICAL DISEASES AND FORENSIC BIOTECHNOLOGY

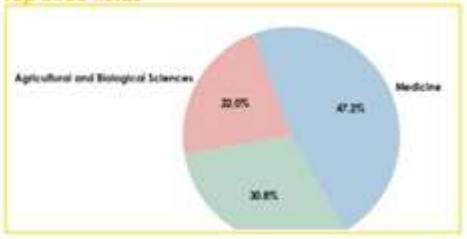
SCORE 4/5



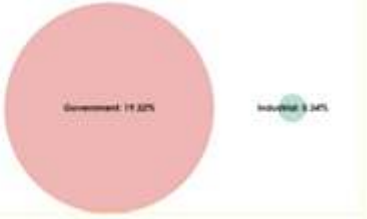
Number of Publications: 295

Number of Open Acces: 204

Top three fields



Co-publications

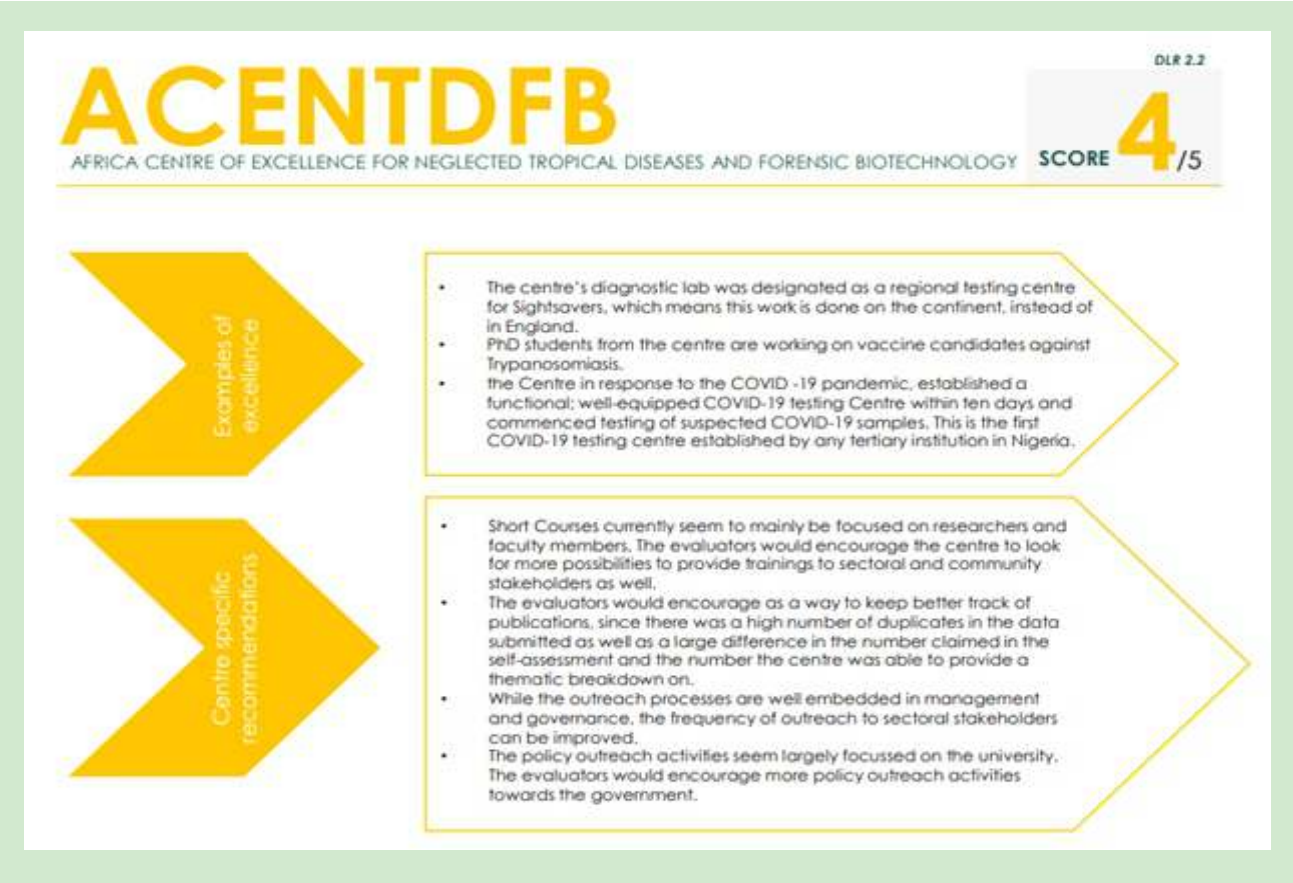


Almost **20%** of publications are co publications with government

The centre has **12 patents** in the area of drug discovery and diagnostics.

2 research outputs were selected during a research pitching competition at the ACE Impact Regional Workshop in Mauritius.

2 students won Student Innovation Research Award (SIRA) in 2022


DLR 2.2
ACENTDFB
AFRICA CENTRE OF EXCELLENCE FOR NEGLECTED TROPICAL DISEASES AND FORENSIC BIOTECHNOLOGY
SCORE 4/5
Examples of excellence
The centre's diagnostic lab was designated as a regional testing centre for Sightsavers, which means this work is done on the continent, instead of in England.
PhD students from the centre are working on vaccine candidates against Trypanosomiasis.
the Centre in response to the COVID -19 pandemic, established a functional; well-equipped COVID-19 testing Centre within ten days and commenced testing of suspected COVID-19 samples. This is the first COVID-19 testing centre established by any tertiary institution in Nigeria.
Centre specific recommendations
Short Courses currently seem to mainly be focused on researchers and faculty members. The evaluators would encourage the centre to look for more possibilities to provide trainings to sectoral and community stakeholders as well.
The evaluators would encourage as a way to keep better track of publications, since there was a high number of duplicates in the data submitted as well as a large difference in the number claimed in the self-assessment and the number the centre was able to provide a thematic breakdown on.
While the outreach processes are well embedded in management and governance, the frequency of outreach to sectoral stakeholders can be improved.
The policy outreach activities seem largely focussed on the university. The evaluators would encourage more policy outreach activities towards the government.

KEY ACADEMIC AND RESEARCH BREAKTHROUGHS

S/NO	DESCRIPTION
1.	A 20% sero-prevalence of dengue was established in Adamawa state and a 12% co-infection with malaria; as well as the first report of the detection of serotype 1 of dengue virus (DENV) in humans and mosquitoes.
2.	A sero-prevalence of about 40% of dengue in humans in Cameroon and co-infection with malaria and typhoid fever of varying rates, as well as detection of DENV serotype 4 in humans and mosquitoes.
3.	Detection of 6 species of trypanosomes in the Jebba axis of River Niger including mixed infections. The most prevalent species was *Trypanosoma congolense;* thus, study area may be endemic for tryps and may serve as nidus for future spread and outbreaks.
4.	Detection, sequencing and demonstration of virulent rabies virus from brain tissues of apparently healthy carrier dogs slaughtered for human consumption.
5.	Development of novel PCR primers based on the genome sequences of circulating rabies virus strains, for more effective surveillance of rabies in dogs in Nigeria with high correlation with direct fluorescent antibody test (DFAT) which is the gold standard for post-mortem rabies diagnosis in dogs.
6.	A report of endemic urinary schistosomiasis among adult males in a community in Maiduguri
7.	The first report of *G. orientalis* isolate in Nigeria producing BCH
8.	Successful cloning of bcs genes into *E. coli* and expression of BCH protein by *E. coli* harboring the cloned gene

The Centre is consistent in the organisation of short courses to enhance the capacity development of professionals in the fields. Most of these are carried out in collaboration with diverse partners drawn from the public and private sectors.

GALLERY OF FACILITIES AND ACTIVITIES









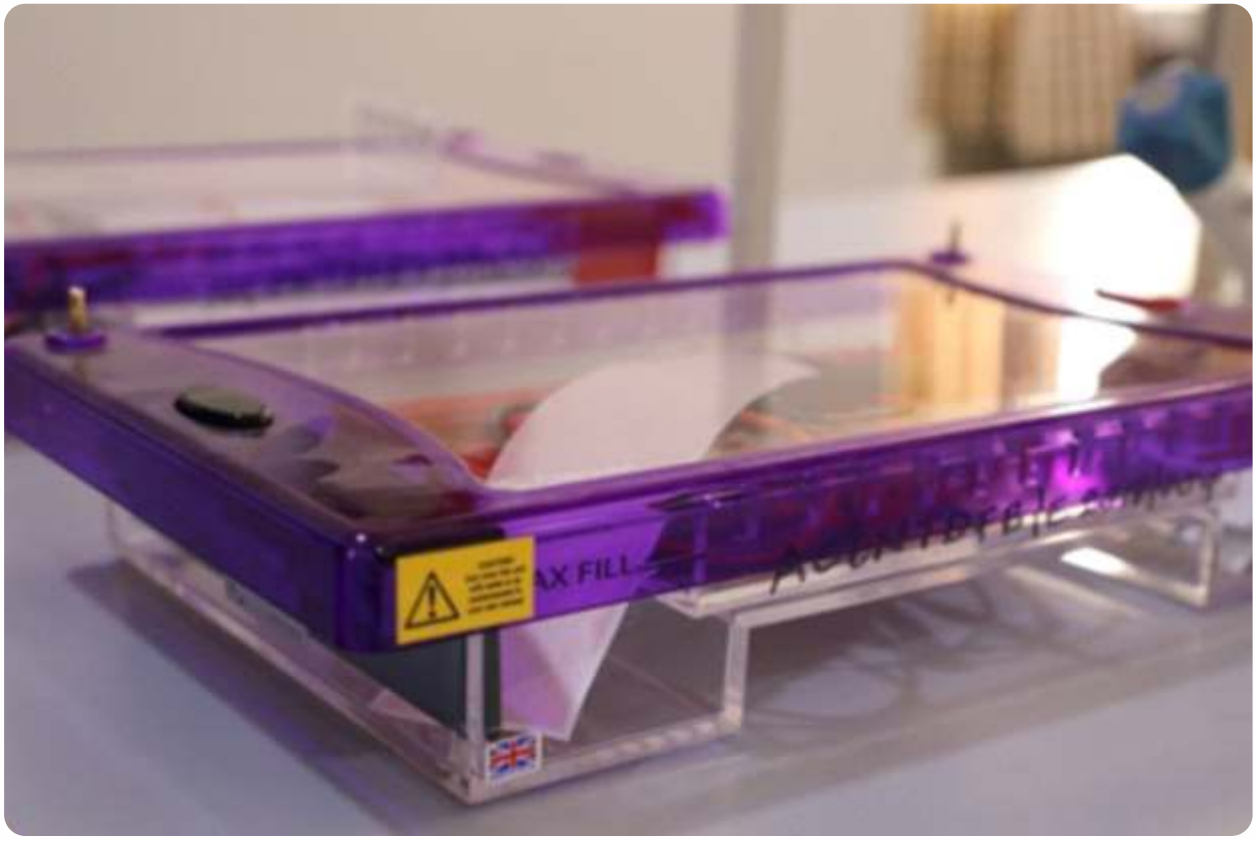


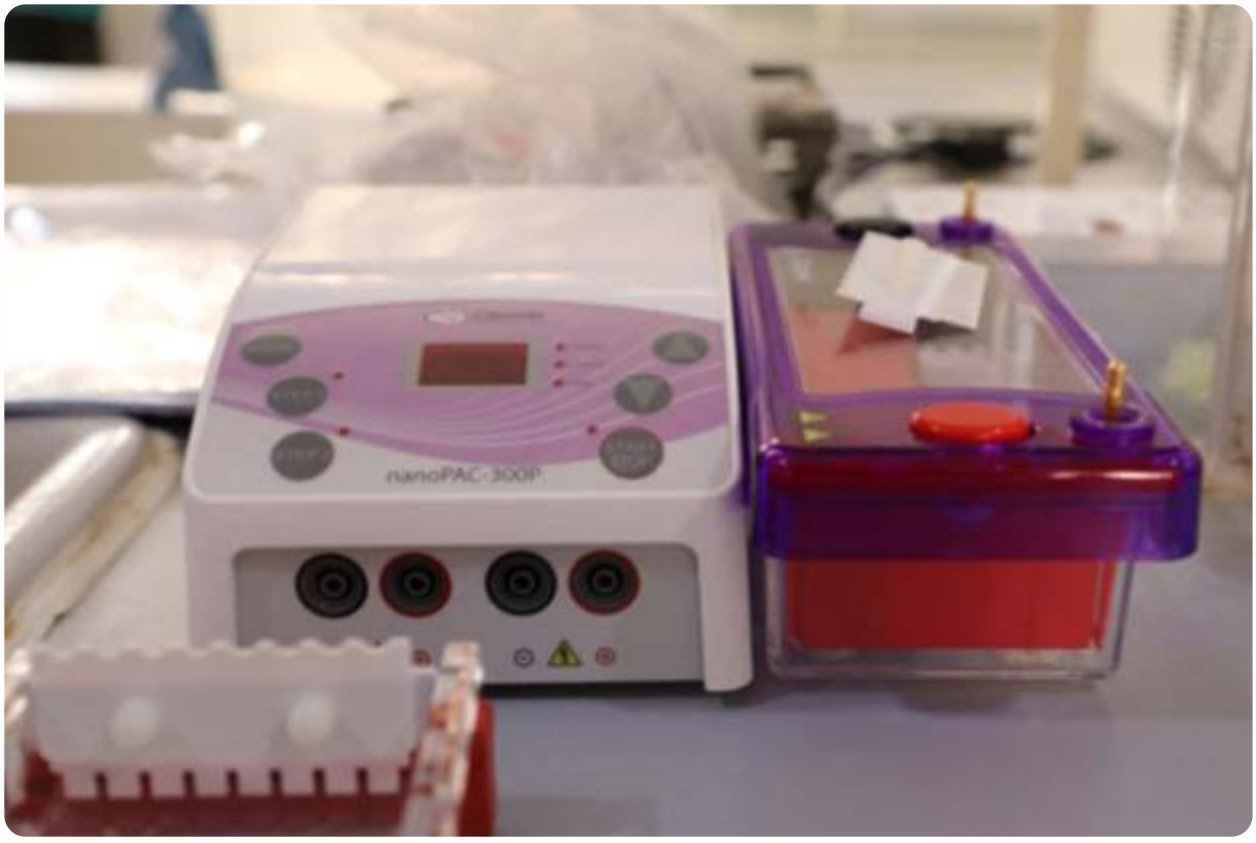



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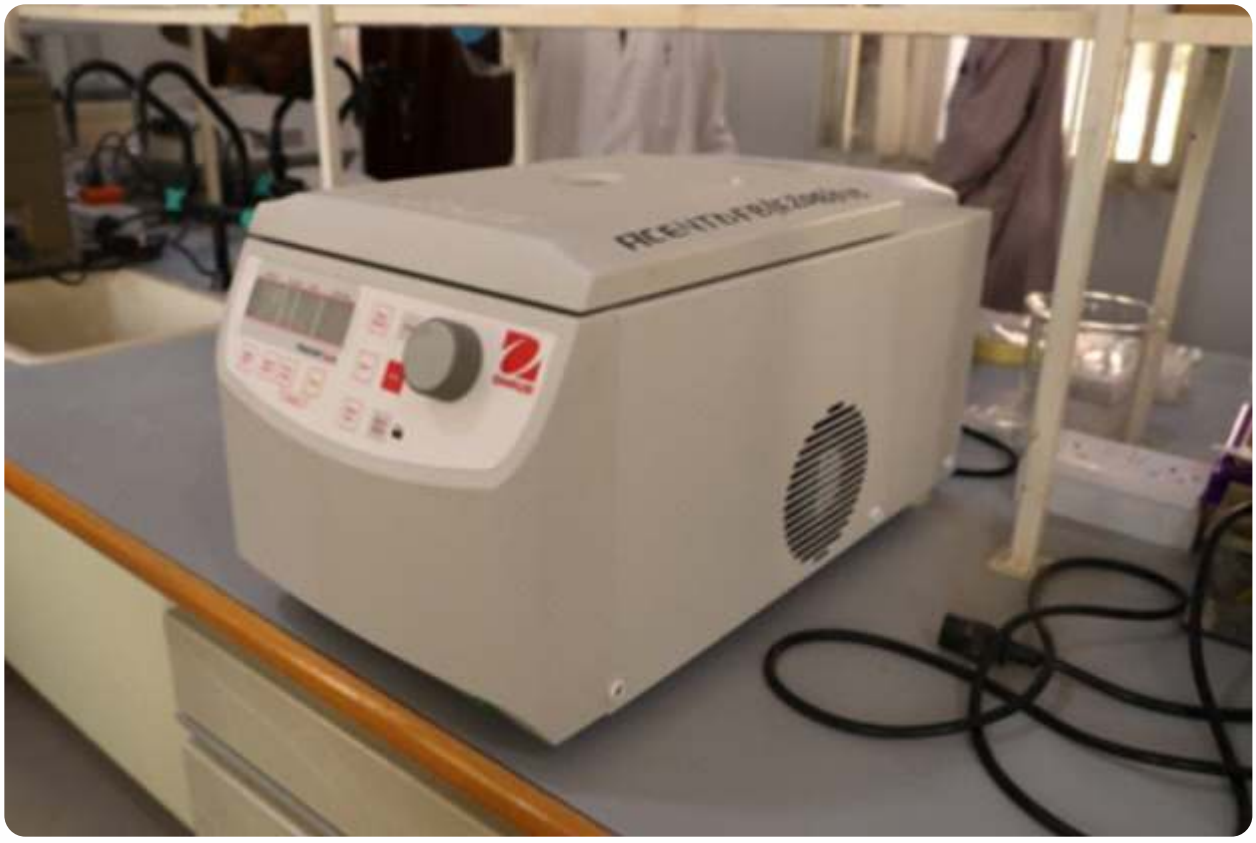













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MAGPIX

ACENTDFB-MRC Training in the Gambia



Group Photograph of ACENTDFB Team, MRC The Gambia Team and The Workshop Participants on Training Workshop on Bioinformatics Jointly organized by ACENTDFB and MRC, The Gambia



During the Lecture Presentation Session by Prof. E. O. Balogun (ACENTDFB)

HANDS-ON TRAINING ON MOLECULAR BIOLOGY: VECTOR BORNE DISEASE IN FOCUS (Phase 1)



ACENTDFB Management And Participants



The participants during introduction lecture



During a visit to the largest Insect Museum in West Africa, at IAR, ABU, Zaria



Field collection of insects



During a practical lab training



During a practical lab training



During a practical lab training



The Former Secretary to the Government of the Federal Republic of Nigeria, Mr. Boss Mustapha, commissioning one of the facilities at the Centre



The Deputy Governor of Kaduna State, Dr. Hadiza Balarabe, the Kaduna State Commissioner of Health and the Chief Medical Director of the ABU Teaching Hospital inspecting facilities of the Centre

UNIVERSITY OF BENIN, BENIN-CITY
CENTRE OF EXCELLENCE FOR REPRODUCTIVE HEALTH INNOVATION (CERHI)

Introduction

Nigeria, the most populous country in Africa, faces significant reproductive health challenges that impact its overall development. With a youthful population—over 60% under the age of 25—the demand for effective sexual and reproductive health (SRH) services is high. However, access to accurate information and quality care remains limited. The country grapples with high rates of maternal mortality, adolescent pregnancy, unsafe abortions, and the prevalence of sexually transmitted infections (STIs), including HIV/AIDS. Socio-cultural taboos, stigma, and gender inequality further hinder young people, particularly women, from accessing essential reproductive health services and education. There are critical weaknesses in the higher education sector in the training and preparedness of diverse future healthcare professions.

Objectives

The Centre for Excellence for Reproductive Health Innovation was designed to build capacity within the West and Central African regions for tackling challenges relating to population and reproductive health in the regions. A key aspect is in the integration of effective sexual and reproductive health services. CERHI aims to promote interdisciplinary education, practical training, and evidence-based approaches. The ultimate priority is to empower students with the tools to improve reproductive health outcomes in Nigeria. This will contribute to stronger health systems, more equitable access to care, and better health and socioeconomic prospects for future generations.

Summary of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in PhD	10	10	2	2	35	30	4	4
Enrolment in Master's Programmes	100	30	25	8	128	149	19	12
Enrolment in Short Courses	162	54	36	36	122	170	82	95
Internships	54	54	17	17	137	98	23	16

DESCRIPTION	NATIONAL	INTERNATIONAL
Patents	**1**	**-**
Partnerships	**12**	**18**
Accreditations	**9**	**3**
No. of Publications (journals, etc)	97	

	Target	Actual
REVENUE ($)	**$629,447**	**$1,625,264**

PROJECT COSTS ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	$5,000,000	$5,698,702	$5,653,172	99.2%

DLI PERFORMANCE (%)

DLI (%)																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		100		100	100		100

The Centre established a high-fidelity simulation laboratory and collaborates with key medical institutions such as the Boston Children's Hospital and Harvard University. Complementing this is the high-capacity general and molecular laboratory that supports healthcare goals through general medical tests, including general microbiology, haematology, chemistry, and immunology tests; and a high-capacity molecular lab able to undertake some of the most complex micro-and DNA analyses. The Centre influenced approaches to sustainable academic and research programmes in the University of Benin. These include support in the integration of technology in teaching, learning and research which promotes standards across the institution. Its Maternal Health Research programme has made impact in addressing the issue in the wider community.

In response to the COVID-19 pandemic, CERHI collaborated with the University of Benin Teaching Hospital (UBTH) and the African Centre of Excellence in Genomics of Infectious Diseases (ACEGID) to establish a COVID-19 testing unit. Equipped with a state-of-the-art RT-PCR machine, this facility became one of the first in Edo State to be validated by the Nigerian Centre for Disease Control (NCDC). Additionally, CERHI played a pivotal role in validating rapid diagnostic test kits for COVID-19 in Nigeria.

CERHI has been instrumental in conducting research aimed at reducing maternal mortality. Notably, a study led by CERHI demonstrated a significant reduction in eclampsia-related deaths in Nigerian referral facilities through multifaceted interventions. It has a high-fidelity simulation laboratory in collaboration with Boston Children's Hospital and Harvard University, USA. The high-capacity general and molecular laboratory is able to undertake most general medical tests, including general microbiology, haematology, chemistry, and immunology tests, as well as undertake some of the most complex micro-and DNA analyses. CERHI currently has one of the only functional Liquid Chromatography–Mass Spectrometry (LCMS) machines in Nigeria.

GALLERY OF FACILITIES AND ACTIVITIES











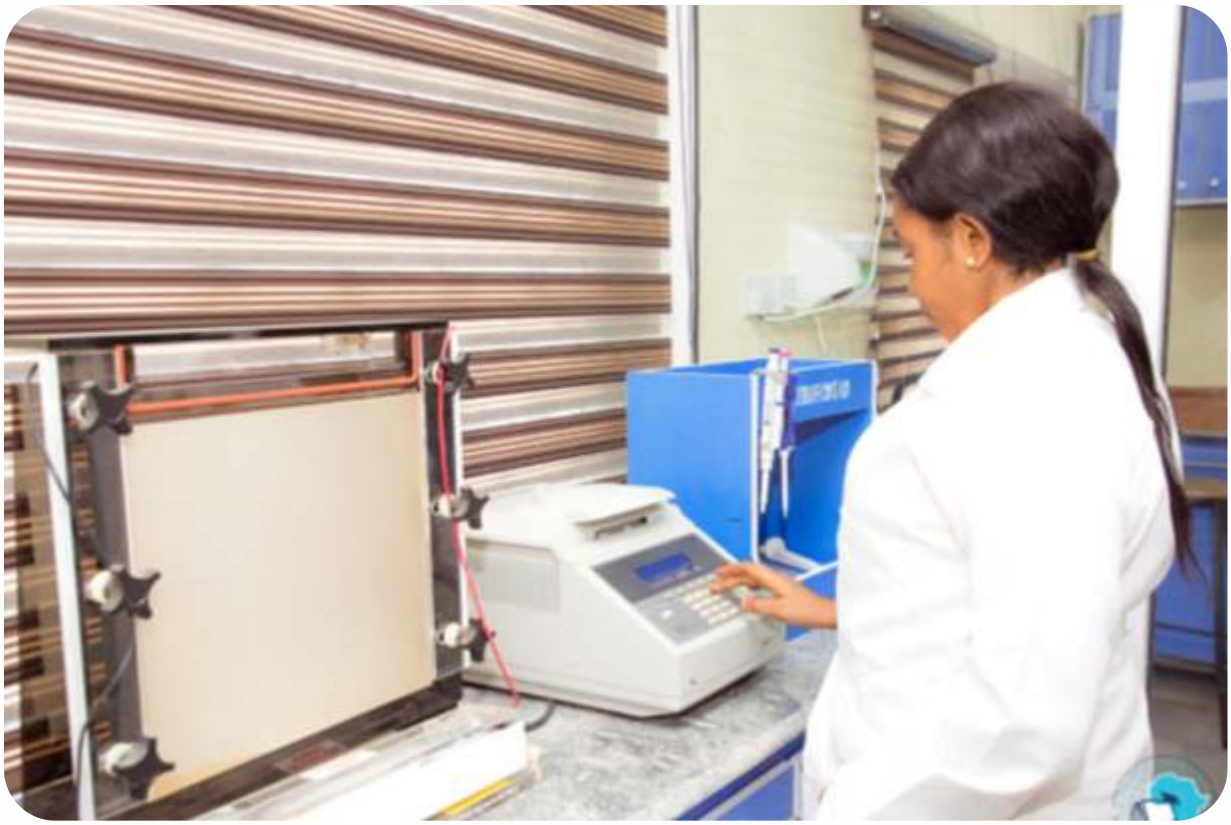



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BAYERO UNIVERSITY KANO
CENTRE OF EXCELLENCE FOR DRY LAND AGRICULTURE (CDA)

Introduction

A substantial part of Nigeria and the West African sub-region is made up of dry lands that continue to pose challenges for the population. These include water scarcity due to limited rainfall, sustained degradation of the soil resulting from climate change and other factors such as desert encroachment. These factors pose challenges to the capacities of the local population to implement agricultural practices. It is also leading to the rise of conflict between the local communities and livestock owners. Addressing these challenges is key to not only food security but also national security, social cohesion and economic development.

Objectives

The Centre is located in Kano, an ancient city noted for transnational trade and pyramids of agricultural products. These pyramids have gradually disappeared, partly due to the impact of the environment on agricultural productivity and other economic factors. CDA serves as a multidisciplinary platform for addressing the complex challenges of dryland ecosystems, which require insights and expertise from various scientific and social domains. In line with this, it draws researchers from diverse disciplines such as Agriculture, Engineering, Environmental Sciences, Biological Sciences, Computing, Business, Management and Social Sciences.

Summary of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in PhD	10	10	6	5	96	15	9	9
Enrolment in Master's Programmes	34	24	6	4	285	40	8	6
Enrolment in Short Courses	210	100	100	50	867	400	300	200
Internships	182	50	10	5	20	70	20	10

DESCRIPTION	NATIONAL	INTERNATIONAL
Patents	**1**	**-**
Partnerships	**47**	**20**
Accreditations	**8**	**7**
No. of Publications (journals, etc.)	170	

REVENUE ($)	Target	Actual
	1,384,877	**1,641,333.07**

PROJECT COSTS ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	$5,000,000.00	$5,691,721.00	5,259,357.81	92%

DLI PERFORMANCE (%)

DLI																								
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
100		100		84	100	100		100	100	100	100	100	100	100	100	100		100			100	100	

Partnerships and collaborations are key strategic approaches of the Centre in addressing the challenges of dry land agriculture. This is ideal considering that the problem cuts across communities and nations. CDA's activities have made it a premier agriculture institution in relation to input in agricultural policies and practices.

The Centre has continued to forge strong partnerships with both State and Federal Government bodies, such as the Ministries of Agriculture and Environment allowing it to play a pivotal role in shaping agricultural policies and practices. These collaborations are facilitating the swift translation of research findings into tangible governmental policies and community-based strategies, thereby increasing the Centre's influence and impact on the agricultural landscape nationwide. Regionally, the Centre serves as a hub for research and knowledge dissemination across the West African Sahel, a region severely impacted by climate variability and land degradation. It has already built a wall of knowledge stretching from Senegal to Tanzania with a variety of research focusing on climate change mitigation and adaptation, crop improvement and yield enhancement, food security and nutrition, agricultural technology, and market systems, and sustainable agriculture and environmental conservation.

Academic programmes are strengthening the availability of skilled manpower for teaching, research and community service.

GALLERY OF FACILITIES AND ACTIVITIES





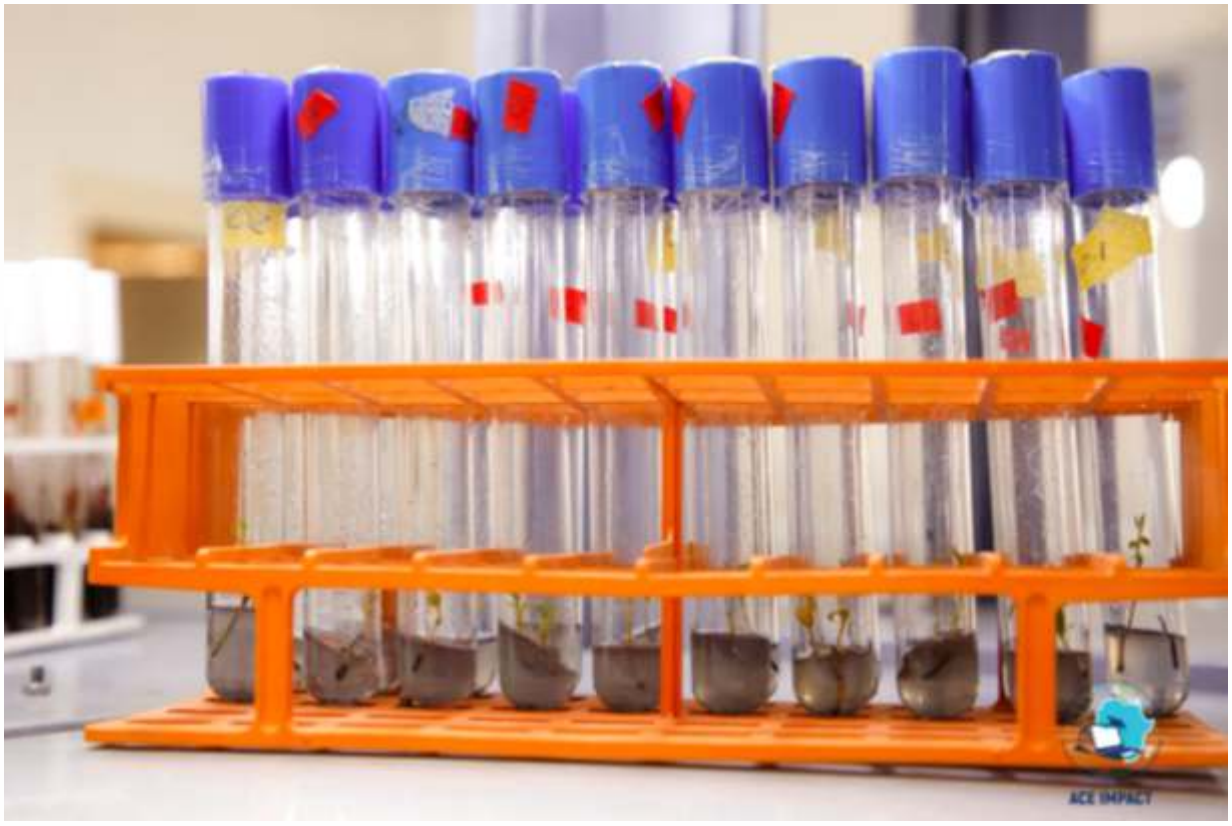

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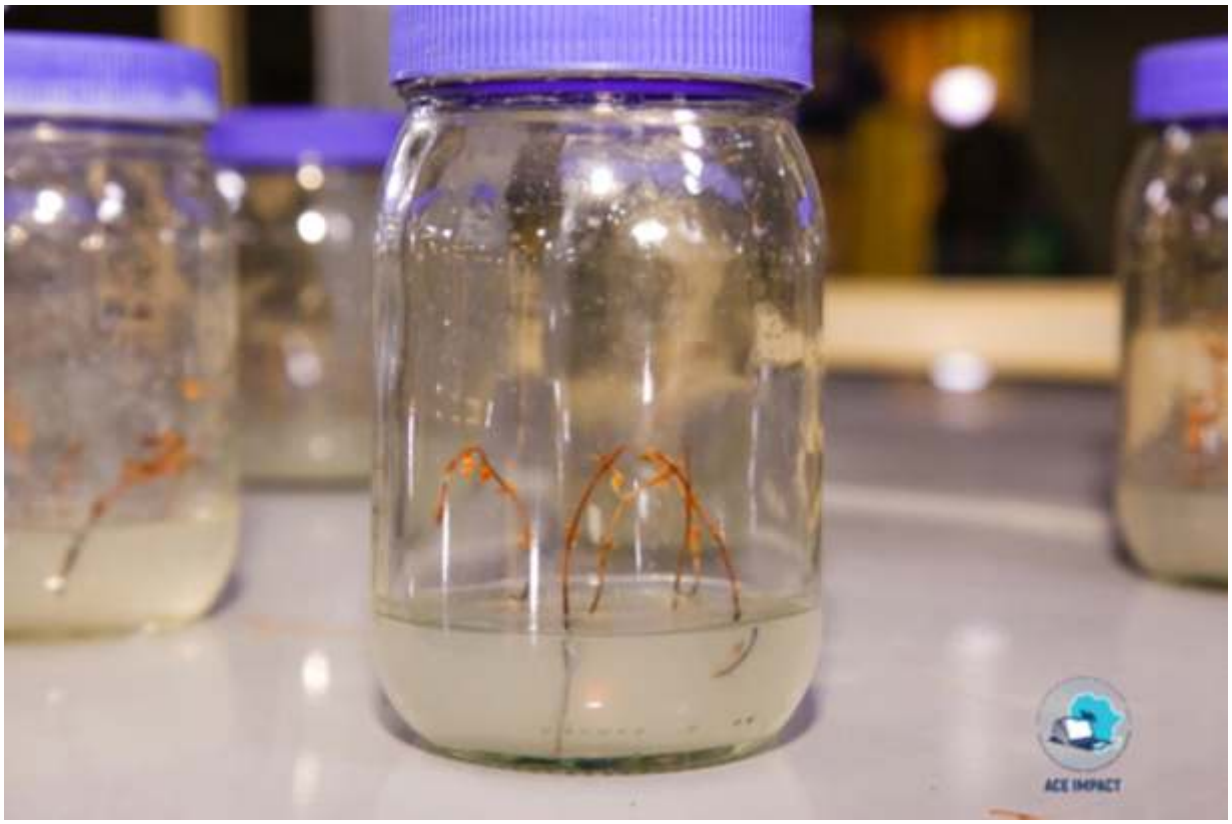






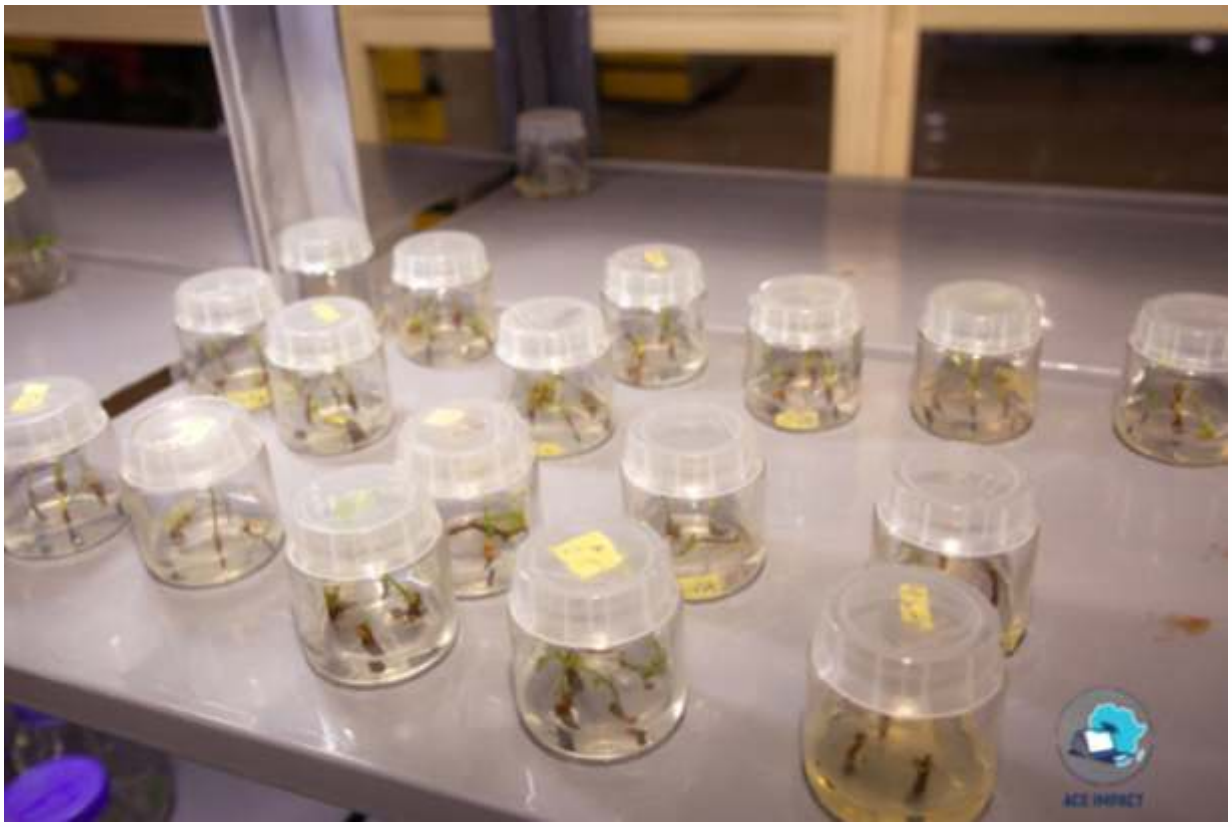



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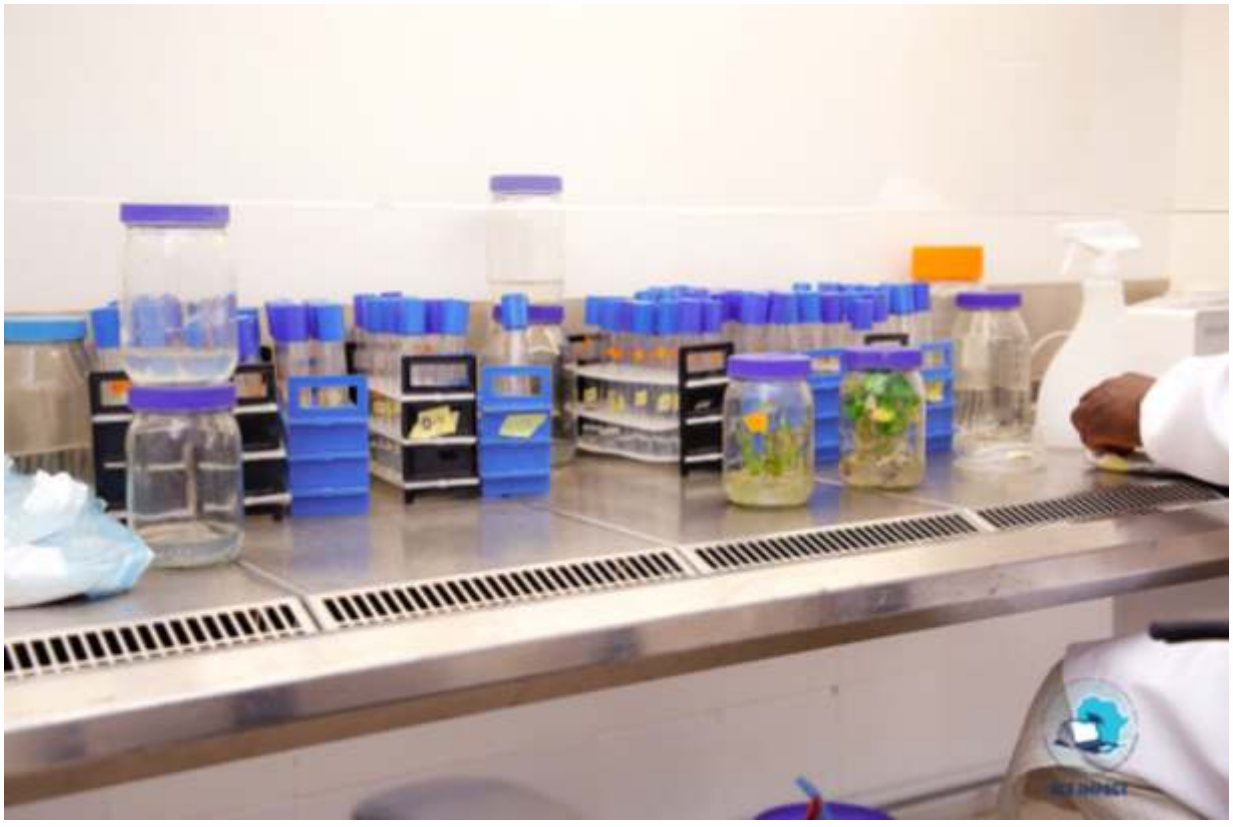













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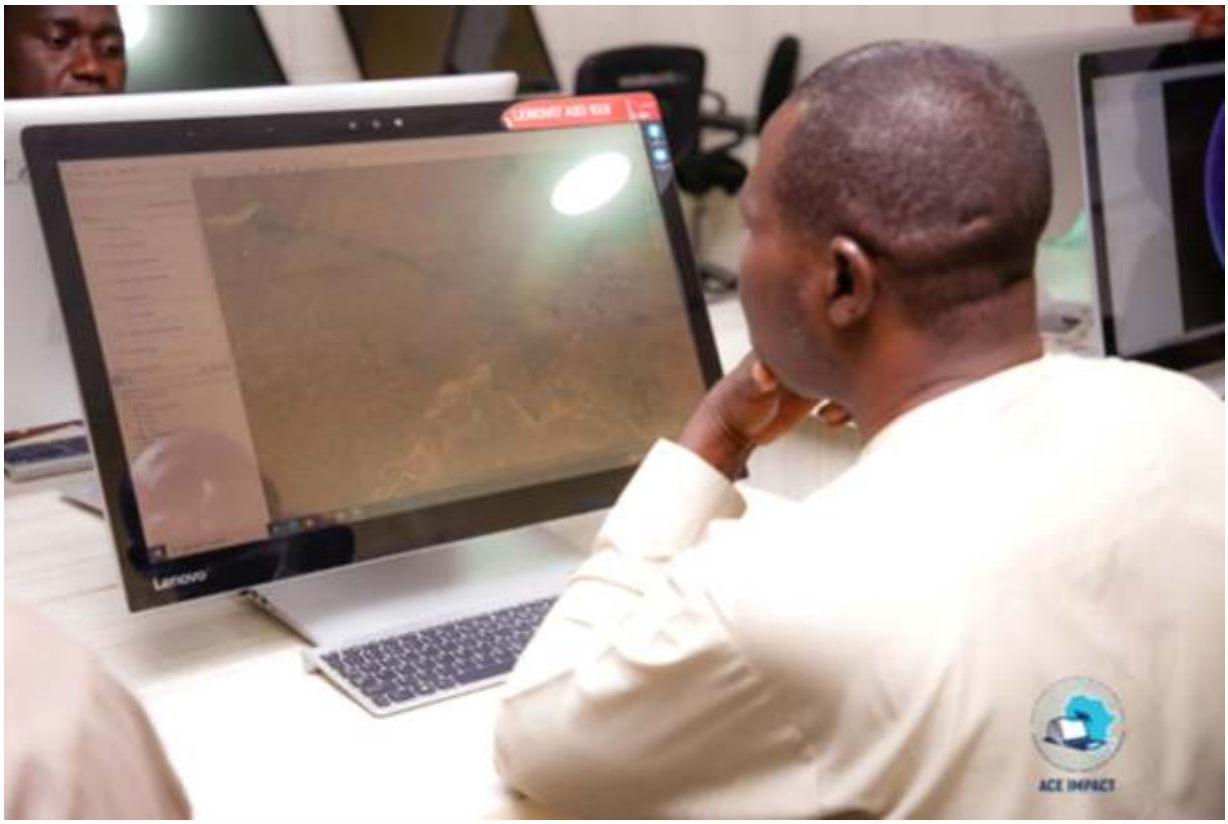

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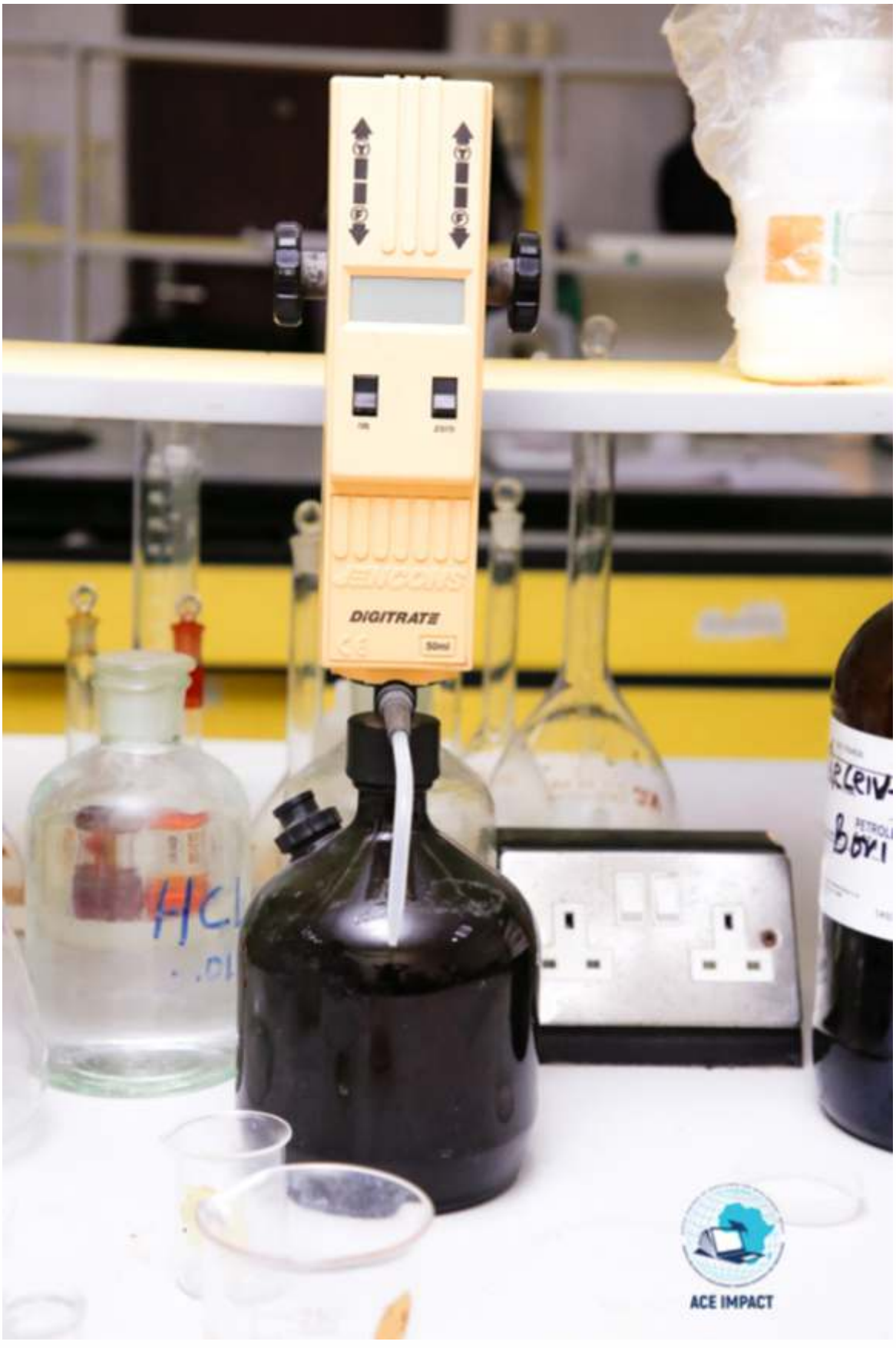

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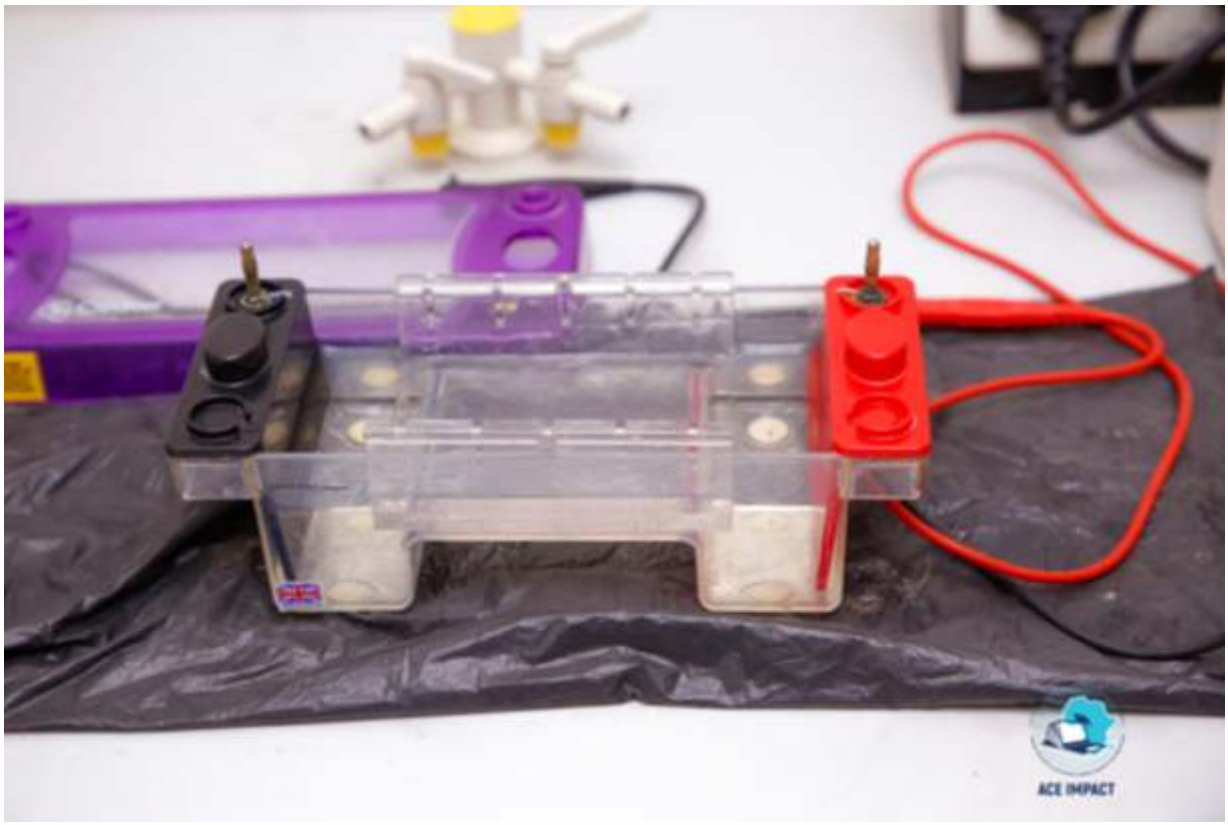

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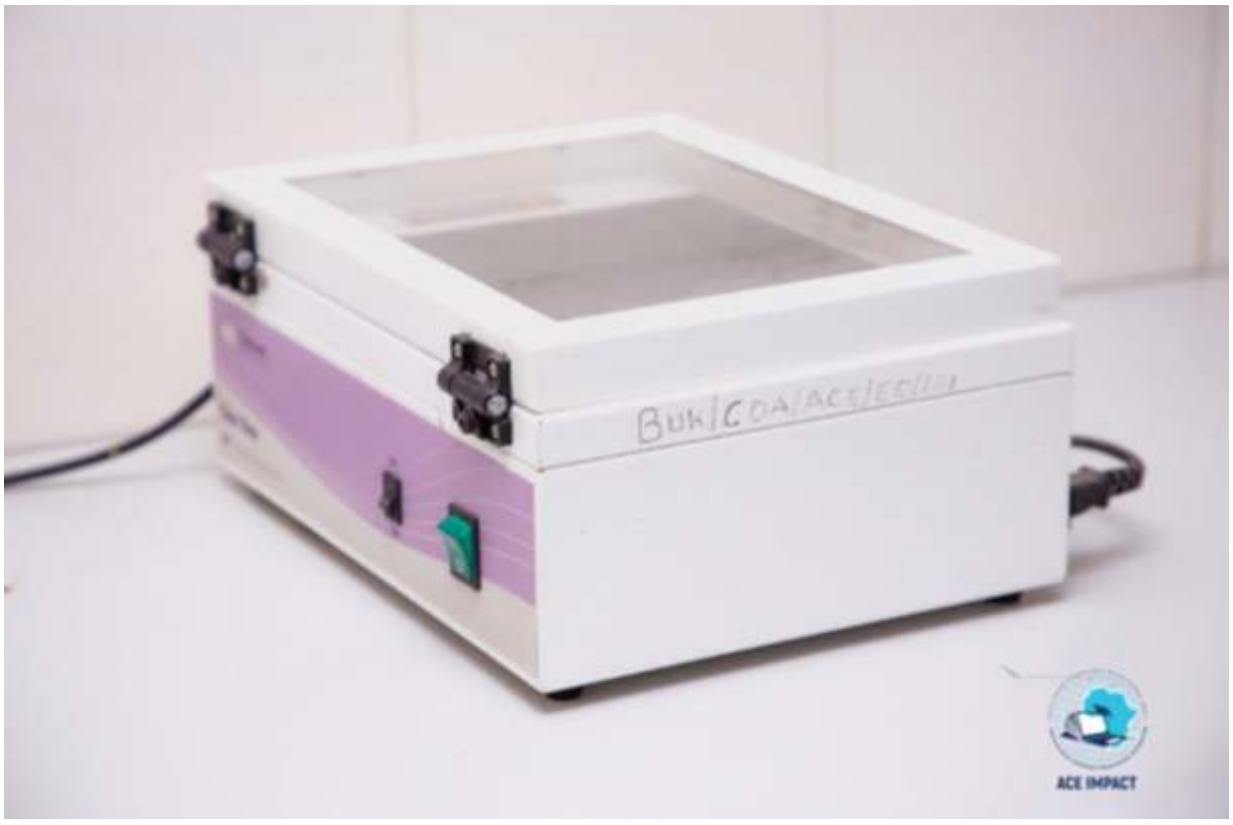

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CDA's Fresh From The Farm
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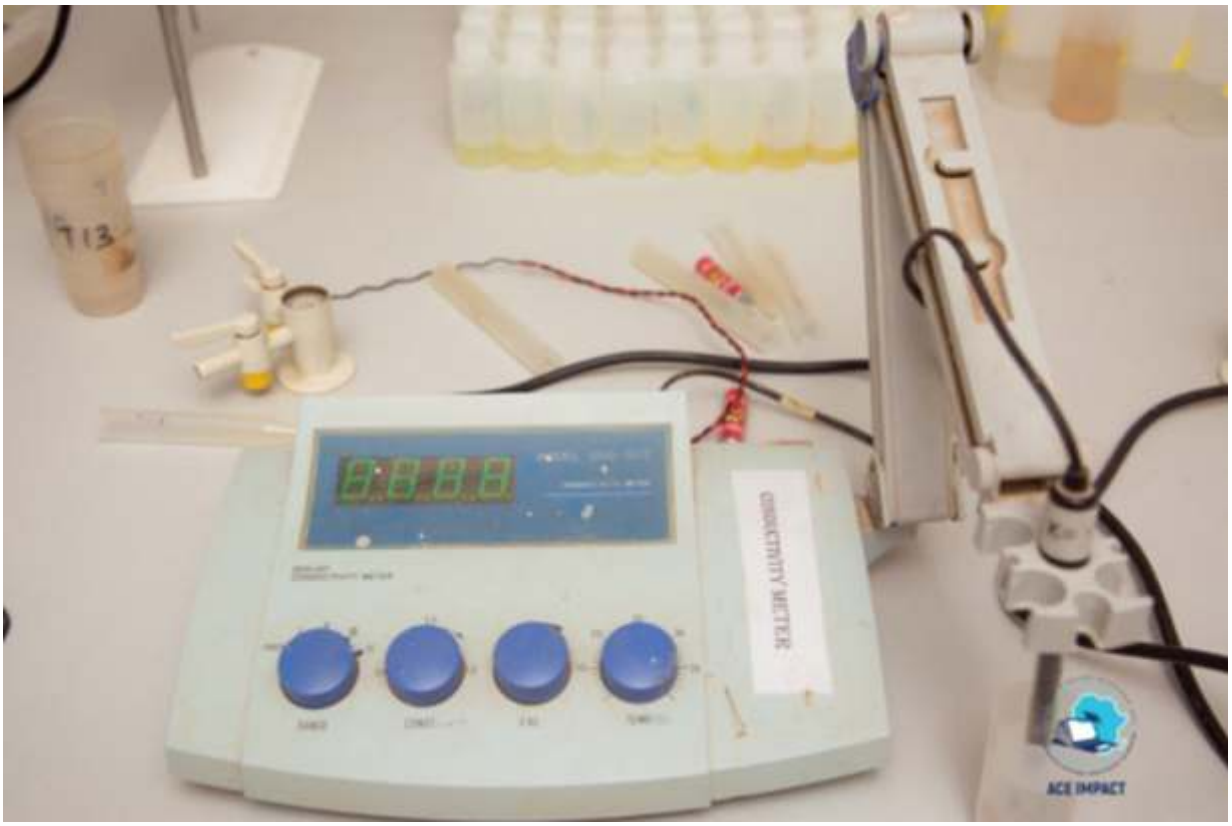

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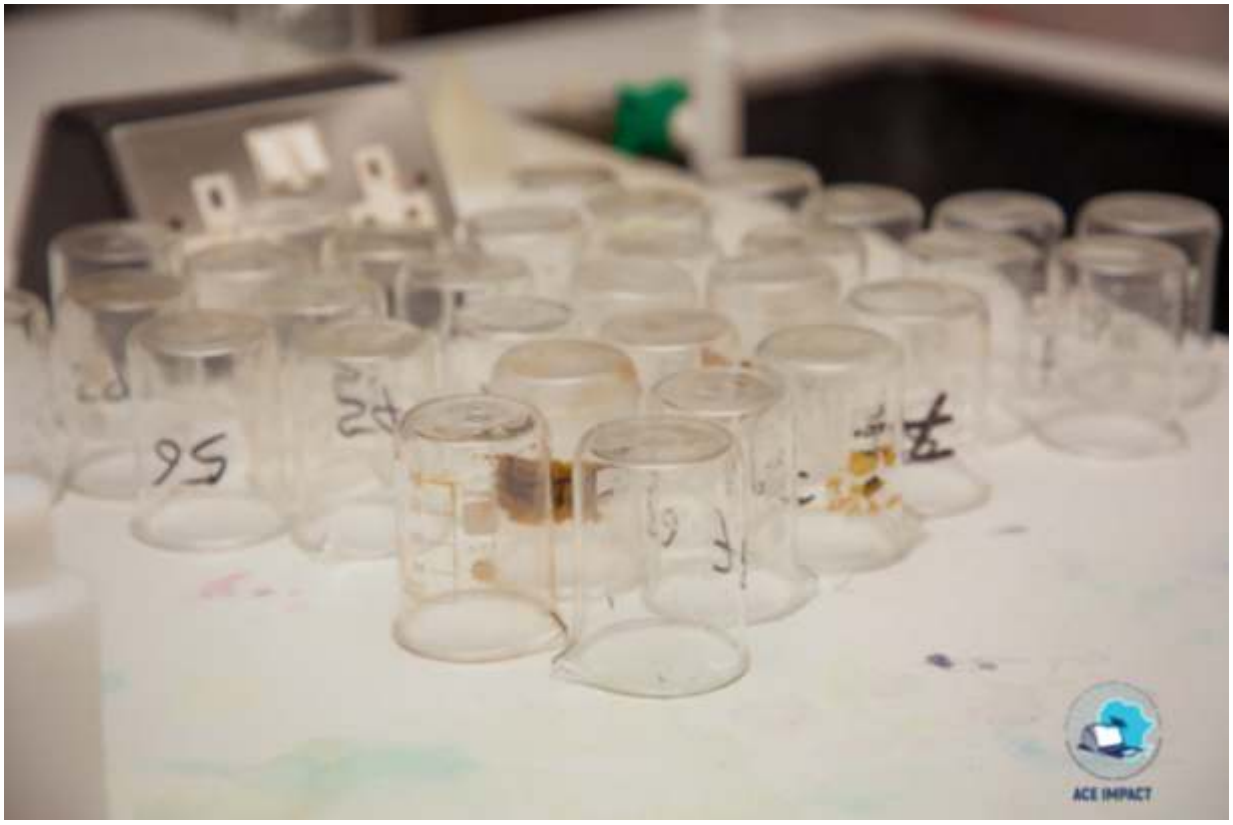

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PHYTIC ACID KIT
Store at 4°C
Megazyme
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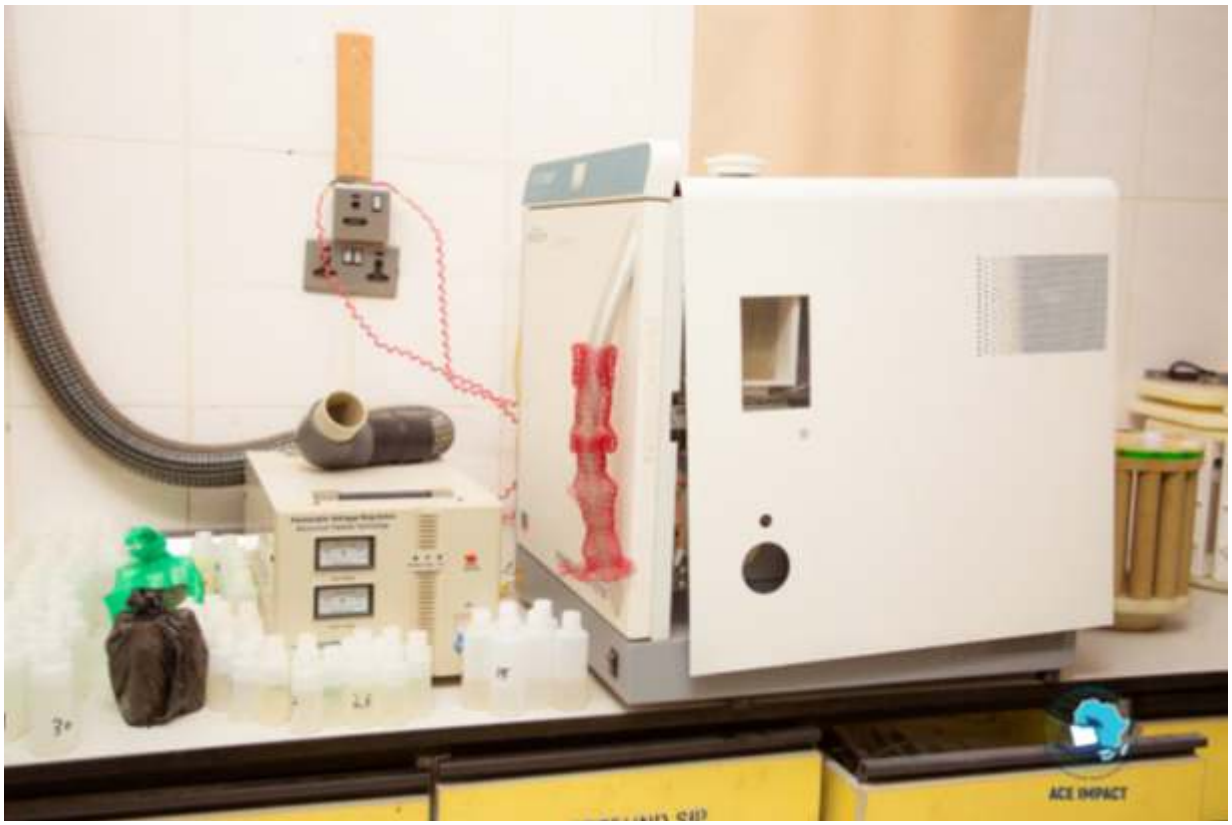

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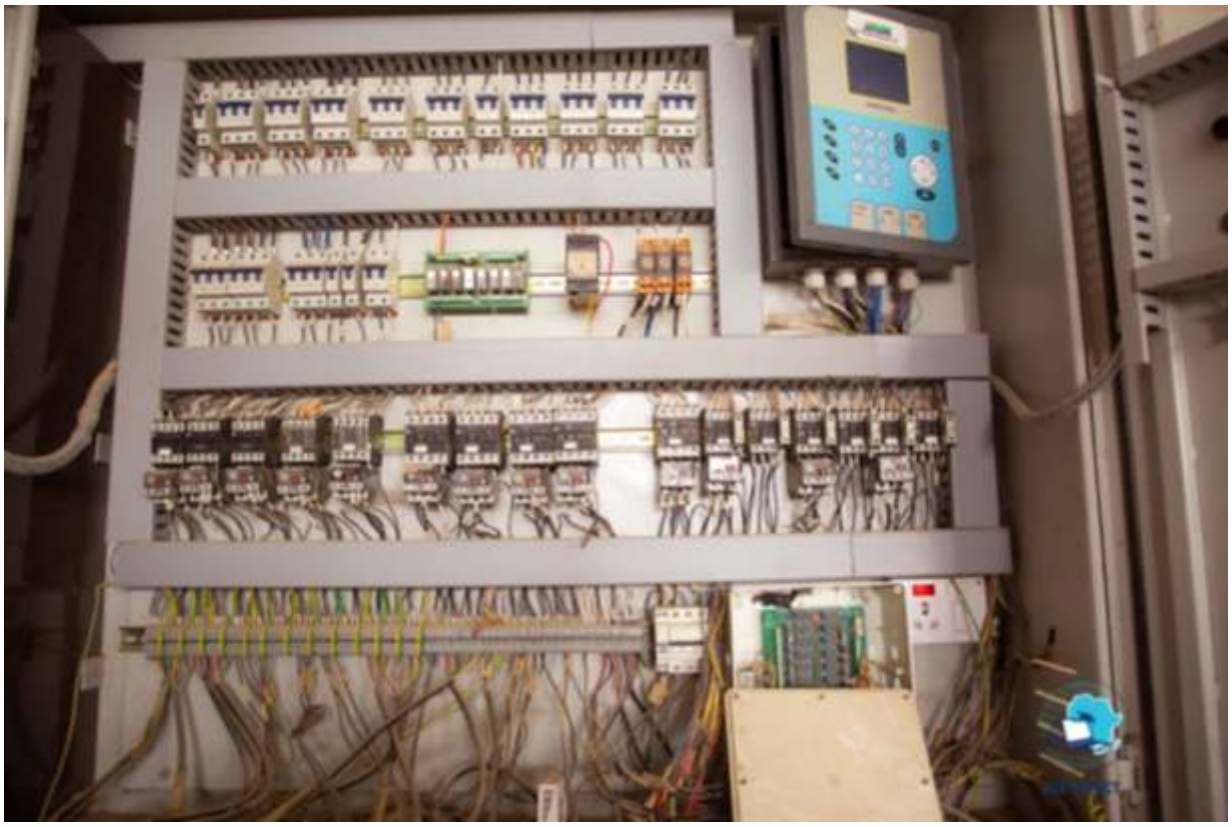

















JAIN
Jain Irrigation Systems Ltd.
NUTRI CARE
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BENUE STATE UNIVERSITY, MAKURDI
CENTER OF EXCELLENCE FOR FOOD TECHNOOGY AND RESEARCH (CEFTER)

Introduction

Nigeria, as other countries of Sub-Saharan Africa, is faced with challenges relating to agricultural and food security. In Nigeria, post-harvest losses impact the capacity for food production and economic development. It is estimated that N3.5 trillion (over $2 billion) of post-harvest losses occur every year. These are in the areas of grains, tubers, fruits and vegetables. Poor storage, transportation and infrastructure are key factors. These factors have impact on employment as an efficient system would provide opportunities for youth employment, food security and economic development.

Objectives

The centre focuses on addressing core national and regional challenges relating to food security, post-harvest losses and youth unemployment. It is also working on addressing the weak linkage between academia, industry and policy makers. This is with the aim of ensuring synergy in the attainment of key objectives on food security and economic development.

Summary of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in PhD	25	20	6	5	53	44	8	5
Enrolment in Master's Programmes	30	30	10	10	98	52	17	12
Enrolment in Short Courses	10	80	20	20	90	99	72	53
Internships	40	40	10	5	235		4	

DESCRIPTION	NATIONAL	INTERNATIONAL
Patents	**2**	
Partnerships	**15**	**2**
Accreditations	**5**	**5**
No. of Publications (journals, etc.)	70	

	Target	Actual
REVENUE ($)	**1,774,290**	**2,363,561**

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	5,000,000	5,709,280	5,268,913	92

DLI PERFORMANCE (%)

DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		100		100	100	100		100	35	100	100	100	100	100	100	100		100	100	100	100		100

The Centre leveraged its location in an environment that is noted for high post-harvest losses. This enabled efforts at addressing the challenge with local stakeholders. It led to the establishment of an institutional innovation and commercialisation unit. The activities arising from this, such as the prototype bakery and agricultural processing hubs, led to internal revenue generation. Coupled with these are the development and implementation of academic and associated training programmes to promote and strengthen the development of manpower in the fields. Key laboratory facilities were established to enhance the quality of teaching, learning and research. Among these is the Food Analysis Laboratory. The activities of the Centre were further strengthened by the diverse strategic partnerships and collaborations within and outside Nigeria. To enhance sustainability, the CEFTER has been integrated into the structure of the parent institution.

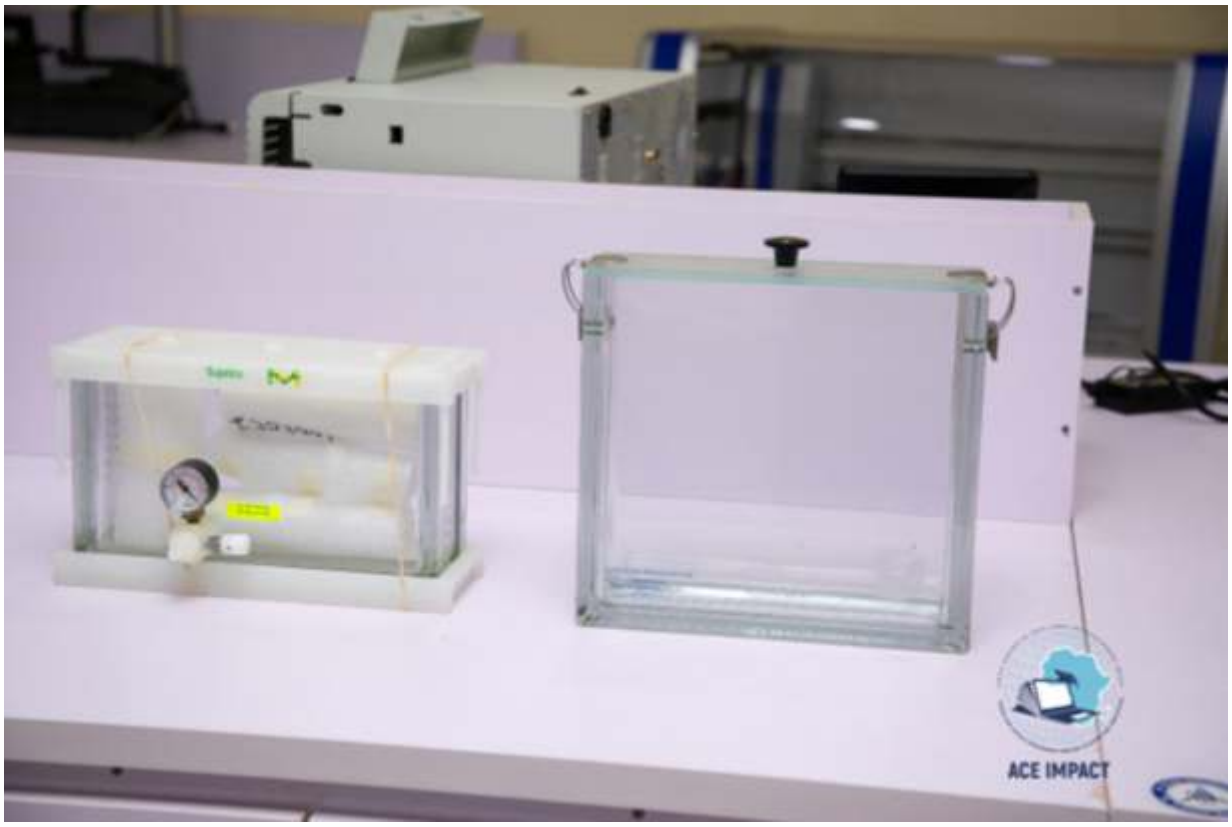
The innovations in the Centre led to the construction of a Food Technology and Innovation Complex (CEFTIC) aimed at creating the needed impact in controlling postharvest losses. The hub is designed for simple and affordable technologies to develop start up ideas and for food processing. The Complex is divided into two sections: the technology modelling, design and fabrication section and the food processing technology section. It is equipped with modern processing facilities like canning, bottling, corking, drying, mixers, fruit juice line, sealing machines, juicers, boilers, biscuit line, bakery line, fabrication line, and a controlled atmosphere facility.

CEFTIC has six (6) production units, which include:

1. Machine tool workshop with a 3D printer, hydraulic press brakes, swing beam shears, an iron worker, plate rolls, profile rolls, horizontal band saws, a welding machine and a lathe machine
2. Tomato paste production line with a tomato bubble washing machine, a preheating pot, a tomato milling machine, a tomato smooth crushing machine, a tomato mixing and boiling tank, a viscous transfer pump and industrial hose and a paste sachet packaging machine
3. Biscuit production line with a mixer, biscuit form machine, tunnel oven, oil spray machine, net belt cooling machine, packaging machine and control cabinet
4. Bread production line with a sixty-four-tray industrial oven, a mixer and a digital scale
5. Controlled atmosphere storage facility
6. Table water production line

GALLERY OF FACILITIES AND ACTIVITIES






New Brunswick
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Milli-Q
Advantage
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VWR
Mini Incubator
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Vi-CELL XR
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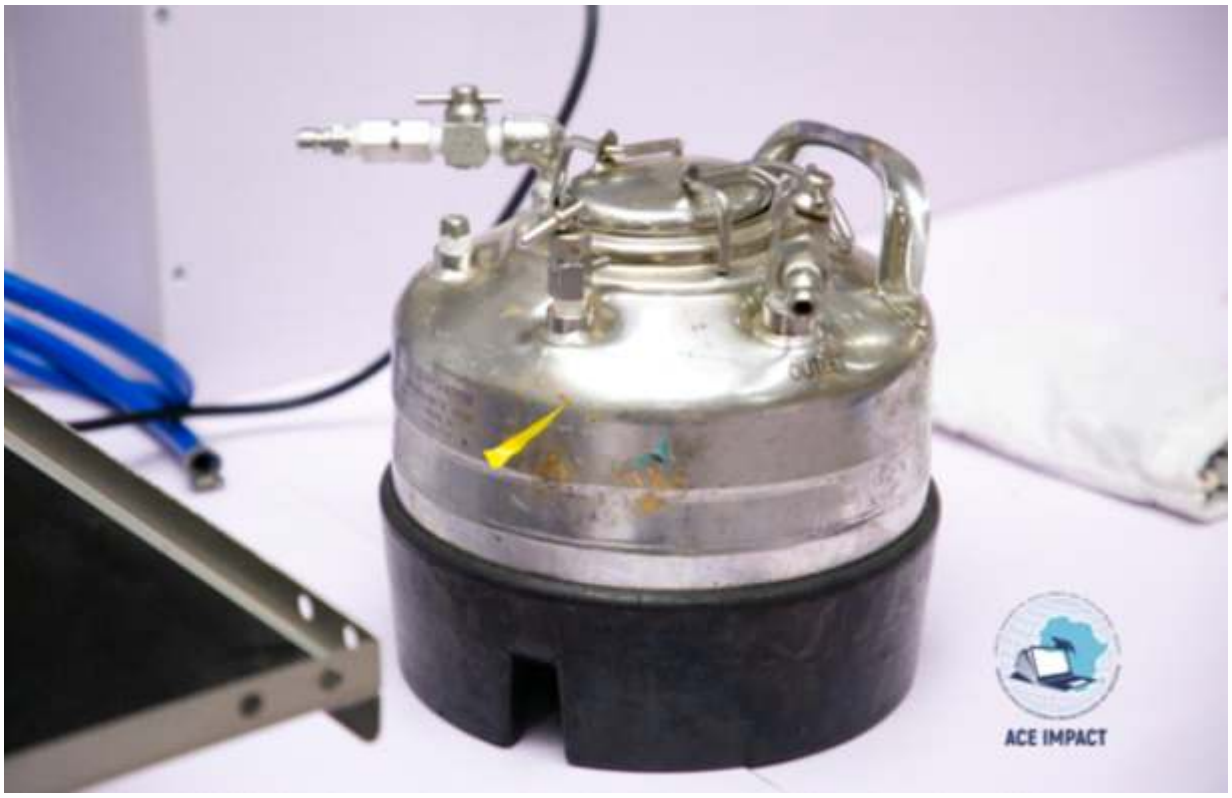



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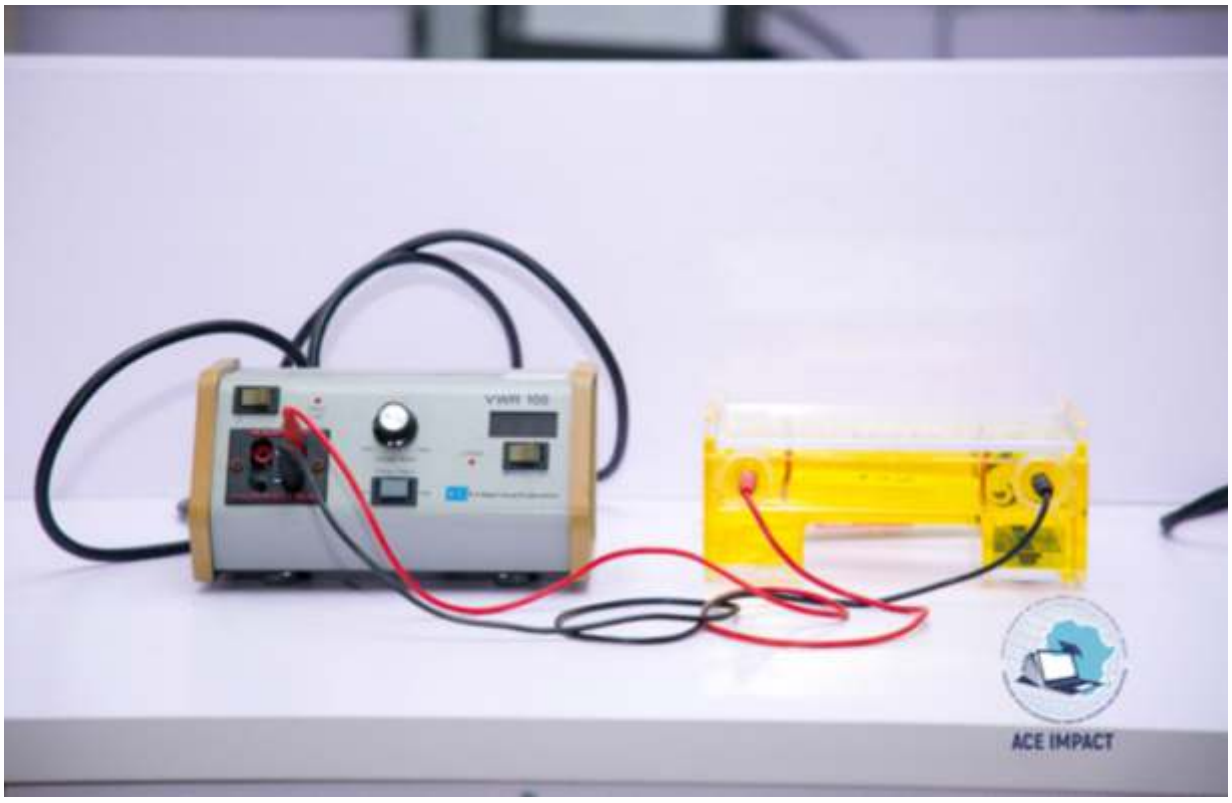

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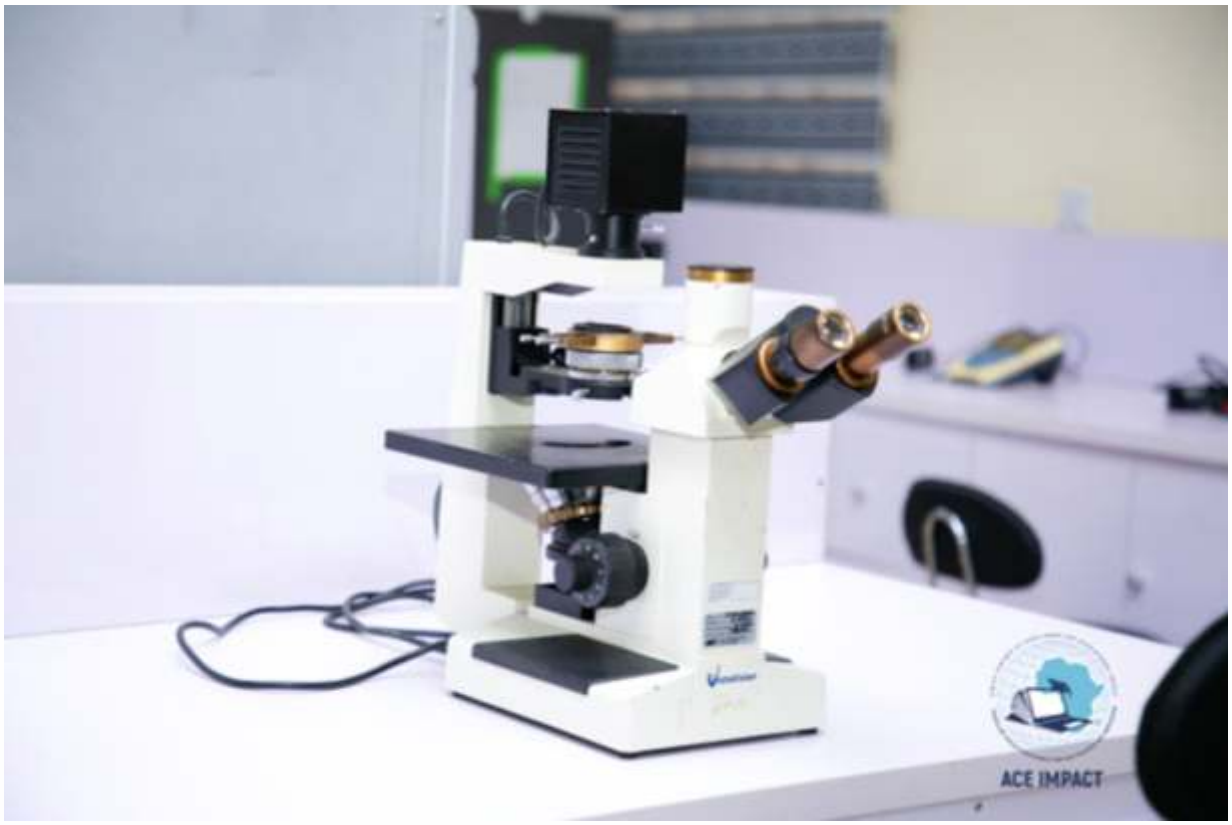

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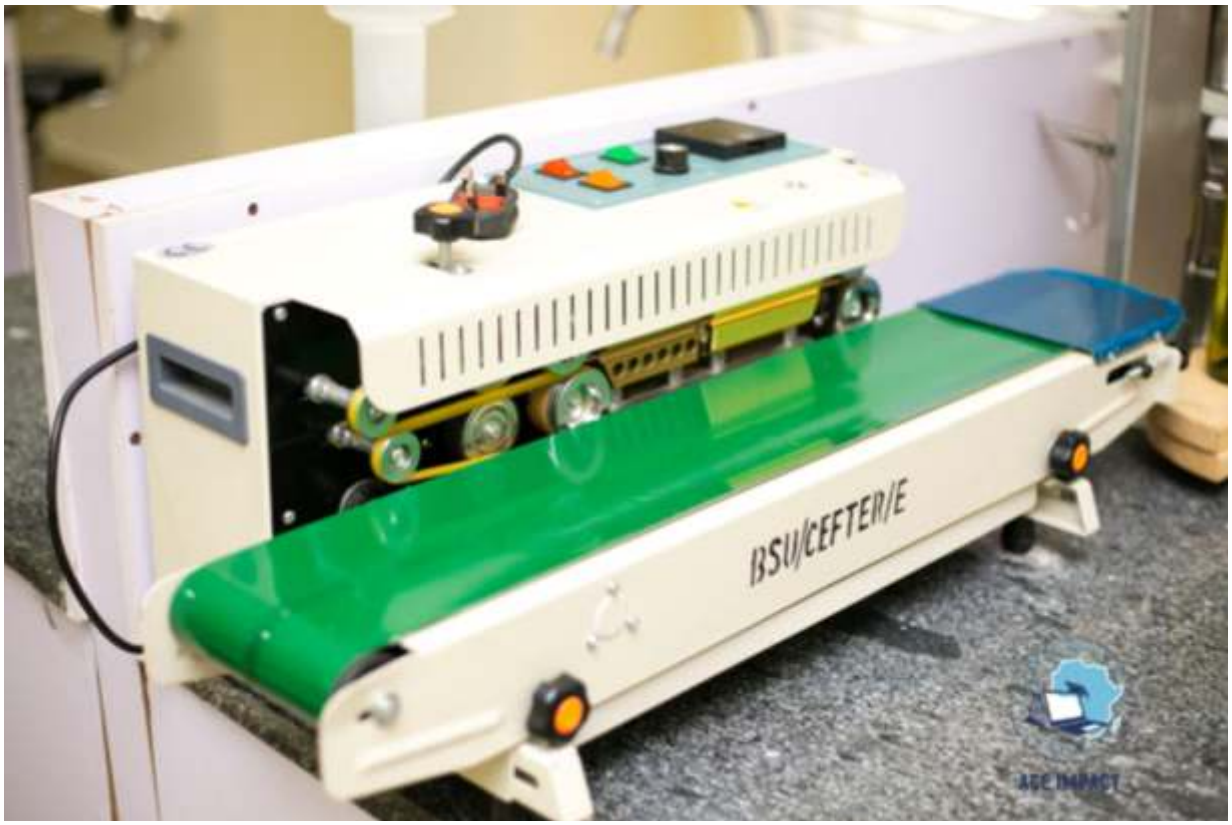

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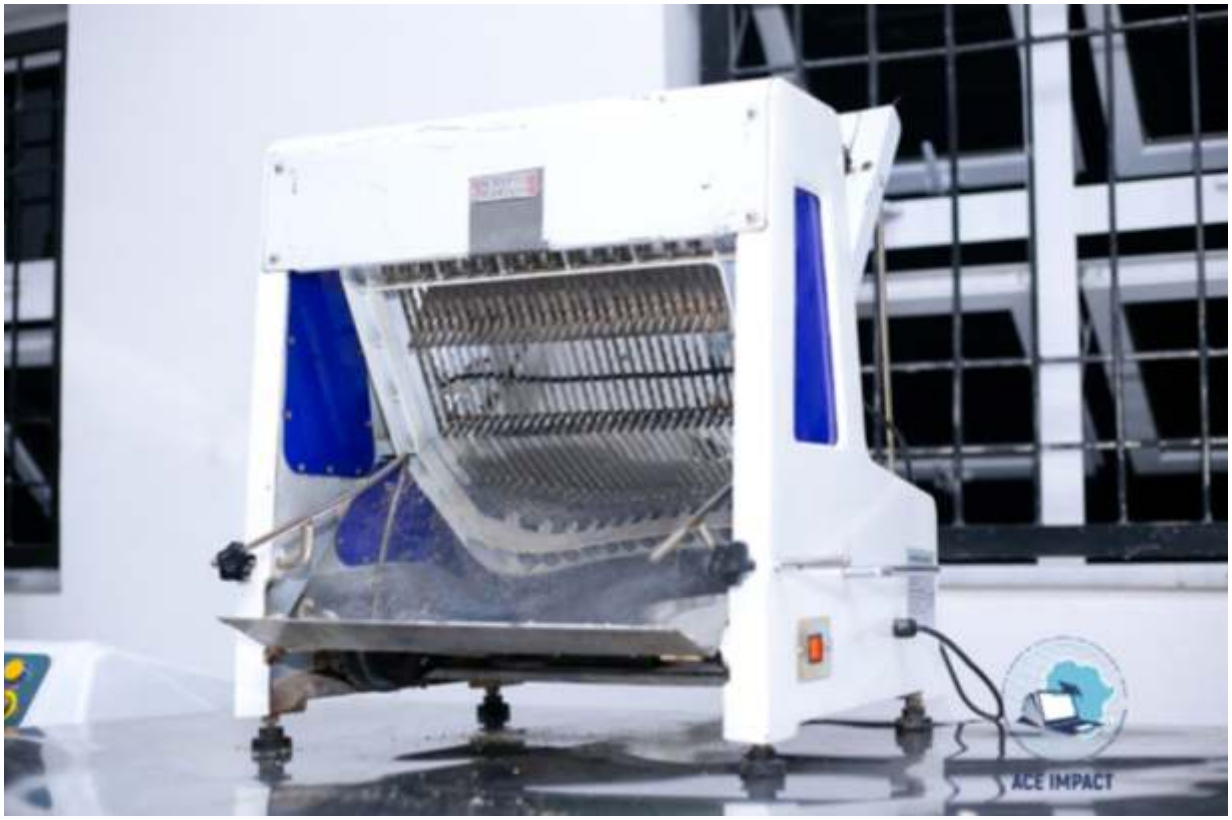

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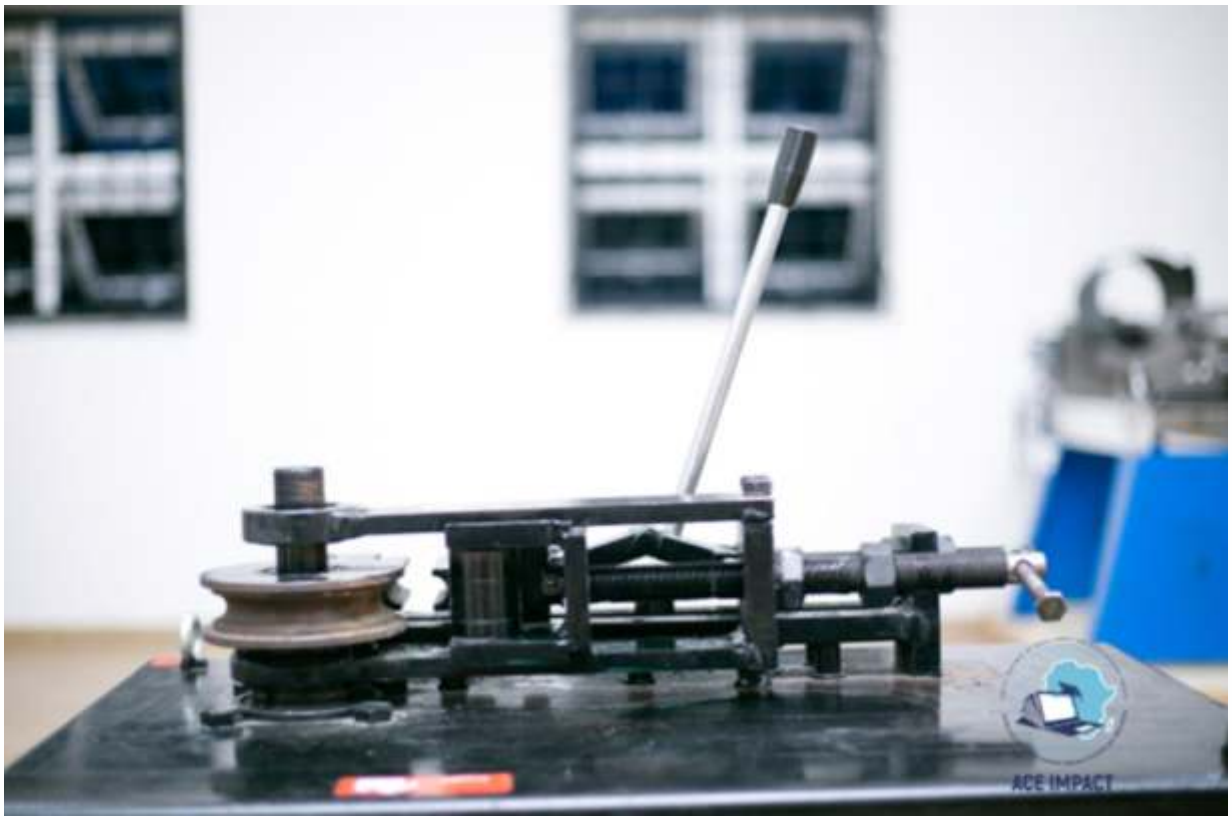

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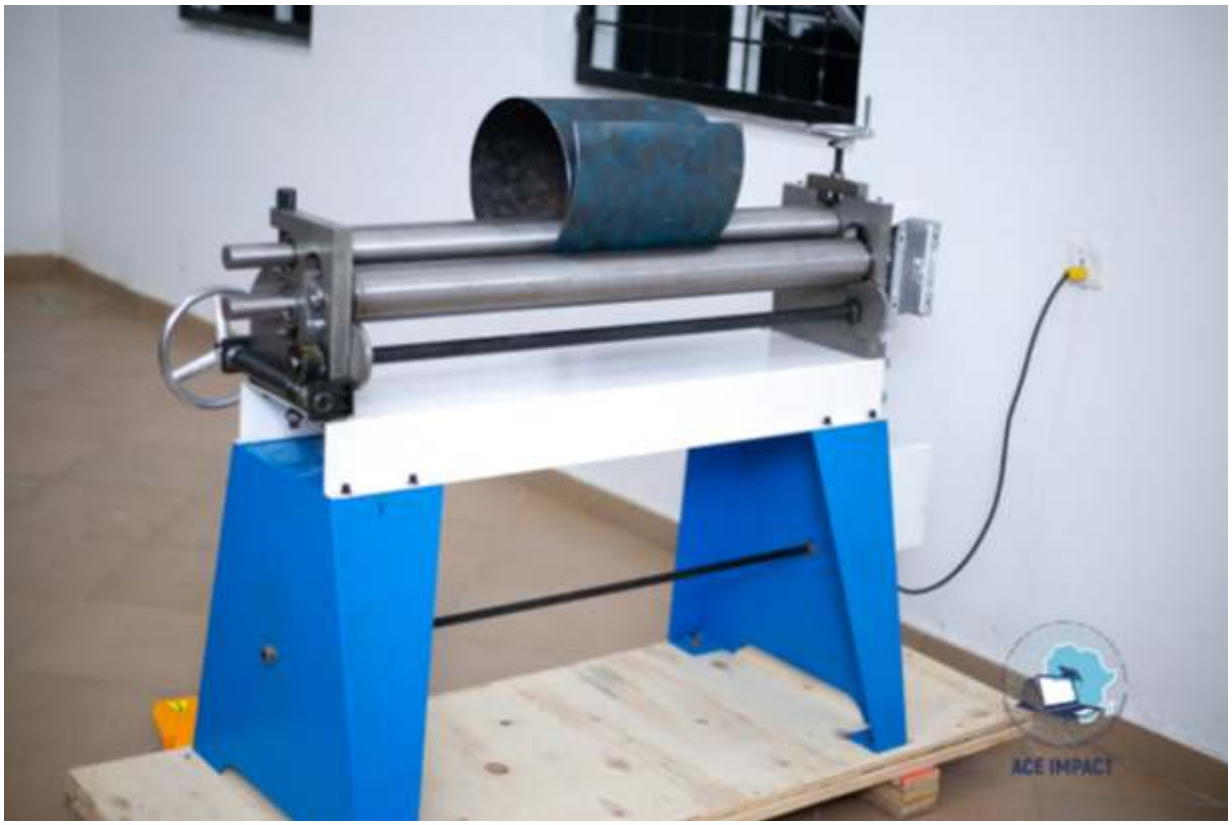

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CEFTER BREAD
TASTY &
NUTRITIOUS


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Environment &
Lighting
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BIOMASS POWERED FISH DRIER
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TIGER NUT MILK EXTRACTOR
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SIEVING MACHINE
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MANGO SLICER
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TORIZED OKRA SLICER
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FEED PELLETIZING MACHIN
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CEFTER
MANGO CHIPS
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CASSAVA
FLOUR
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ACE IMPACT




DRIED
BEANS


TOMATO
PASTE


CASSAVA
FLOUR


LEMON
RINGS
Dried
Lemon
Rings
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RICE FLOUR
RICE FLOUR
RICE FLOUR
RICE FLOUR


CEFTER
Cookies
50g
CEFTER
Cookies
50g


Jobi
Wine
SINCE 2023
ALC. 11%
750ml
ACE IMPACT


CEFTER
Juice
ACE IMPACT


MANGO CHIPS
ACE IMPACT


CFD
CFE
CFA


CEFTER
DRIED
MANGO CHIPS
100%


ACE IMPACT


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CENTRE FOR FOOD TECHNOLOGY
& RESEARCH (CEFTER)
BENUE STATE UNIVERSITY, MAKURDI
HIGH QUALITY
CASSAVA FLOUR (HQCF)


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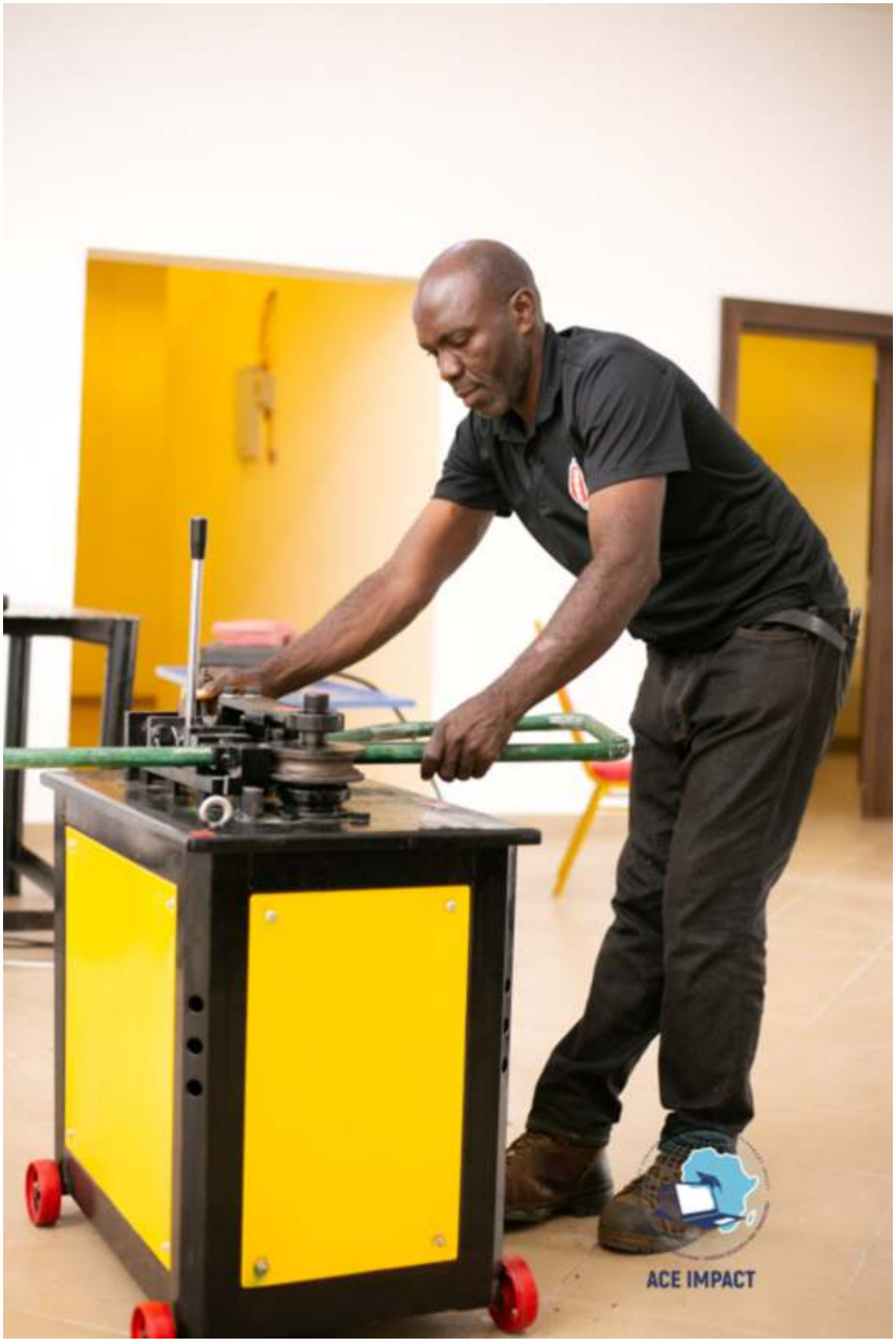



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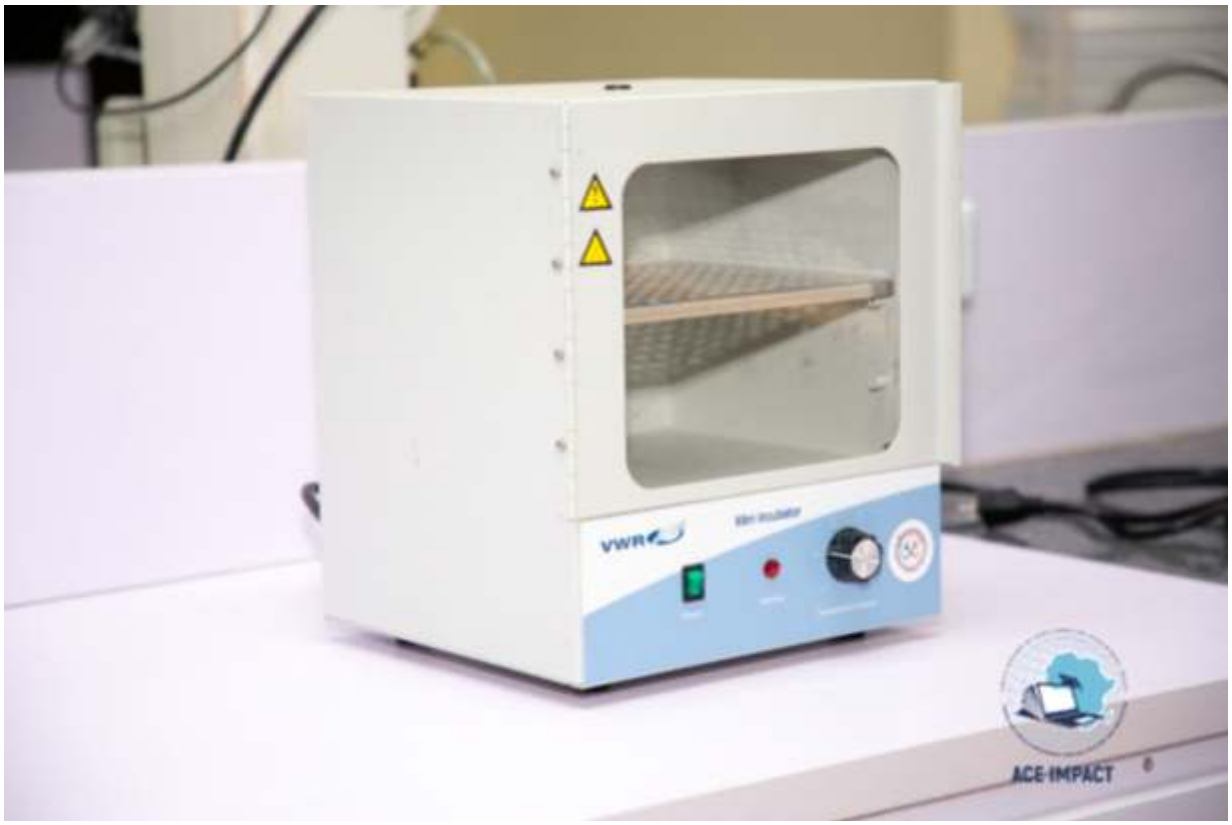

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OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE
OAU ICT-DRIVEN KNOWLEDGE PARK (OAU-OAK)

Introduction

The capacities to attain development goals and competitiveness are tied to the integration of technology. Countries such as Nigeria have long recognised the need to ensure that technology is at the key base of activities in diverse sectors of the economy. This will help to bridge the gap between academic institutions and industry, enhance innovation, skills, and promote entrepreneurship. Despite best efforts, there have been consistent challenges of skills and infrastructure to ensure that technology plays required roles.

Objectives

The Centre was established to bridge the gap between academia and industry. Specific attention is on fostering innovation, practical skills development, and entrepreneurship in the ICT sector. The priority of the Centre is also the development of skills in the sector with high-level programmes in the areas of Computer Science, Computer Engineering, Information Systems, Software Engineering, Intelligent Systems Engineering, Electronic and Electrical Engineering, Agricultural and Environmental Engineering, and Mechanical Engineering.

Summary of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in PhD	47	35	23	3	40	28	12	2
Enrolment in Master's Programmes	39	28	31	7	88	33	0	0
Enrolment in Short Courses	57	33	93	44	110	87	235	65
Internships	96	63	23	3	181	82	12	2

DESCRIPTION	NATIONAL	INTERNATIONAL
Patents	-	-
Partnerships	**15**	**6**
Accreditations	**9**	**3**
No. of Publications (journals, etc.)	182	

REVENUE ($)	Target	Actual
	1,422,000	1,690,581

PROJECT COSTS ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	$5,000,000	$5,900,000	$5,310,000	90

DLI PERFORMANCE (%)

DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		87		100	100	100		100	100	100	100	100	100	100	100	100		100		100	100		100

The work of the Centre gained interest and extensive support from state and non-state actors towards supporting further progress. The project attracted several funds from the Tertiary Education Trust Funds's (TETFund) National Research Fund (NRF). Some agencies of the Federal Government of Nigeria have designated it as Centre of Excellence:

1. Nigerian Communications Commission – Centre of Excellence in Telecommunication
2. Tertiary Education Trust Fund – Centre of Excellence in Digital Literacy and Emerging Technologies in Telecommunication and Centre of Excellence in Digital Literacy and Emerging Technologies
3. Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development – Virtual Reality Laboratory

The EU ERASMUS+ Project also supports the Centre in the implementation of doctoral and master's Degree programmes in Embedded AI. These are enhancing partnerships, training and skills development and promoting the integration of technology in diverse sectors of the economy.

The Obafemi Awolowo ICT-Driven Knowledge Park (OAK-Park) made commendable progress in fostering ICT education, research, and industry collaboration in Nigeria and across the region through increased industry engagement, infrastructure development, and sustainable funding strategies. This was crucial for the Park to realise its full potential and contribute significantly to the nation's technological advancement.

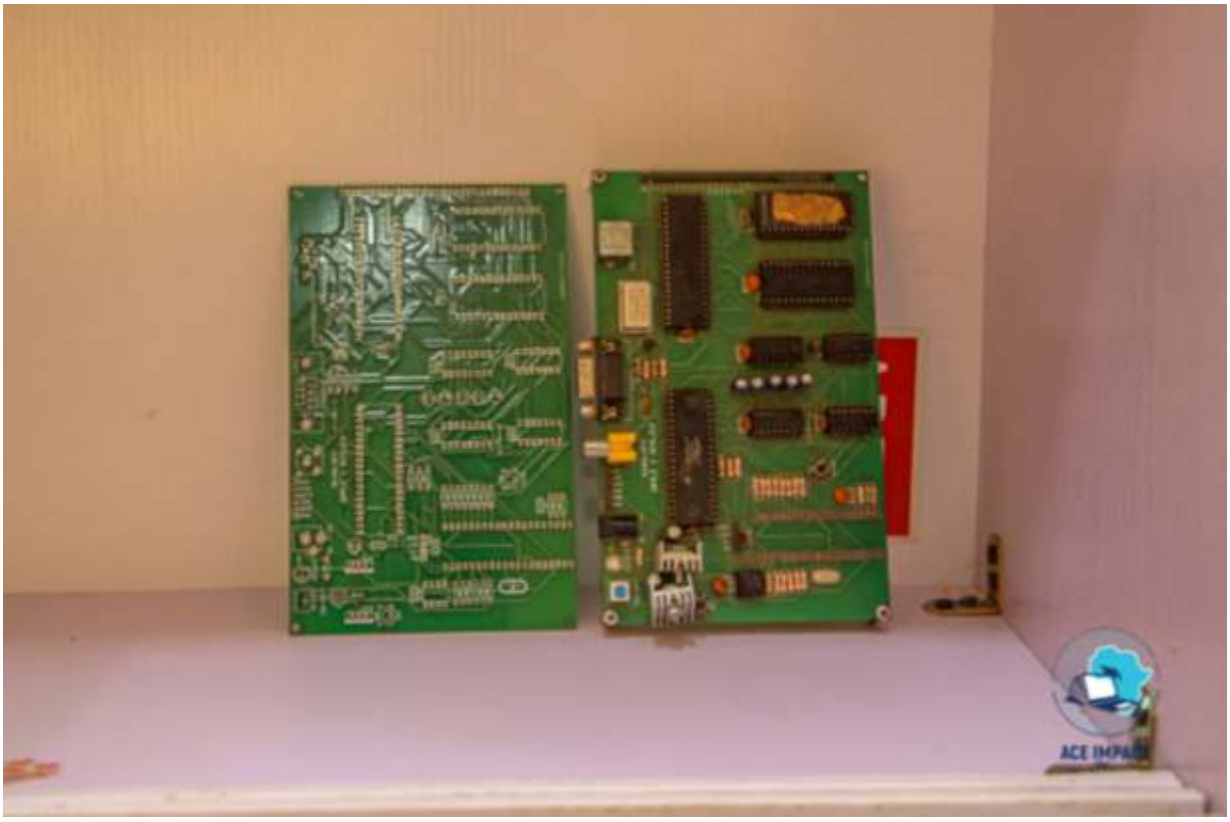
GALLERY OF FACILITIES AND ACTIVITIES







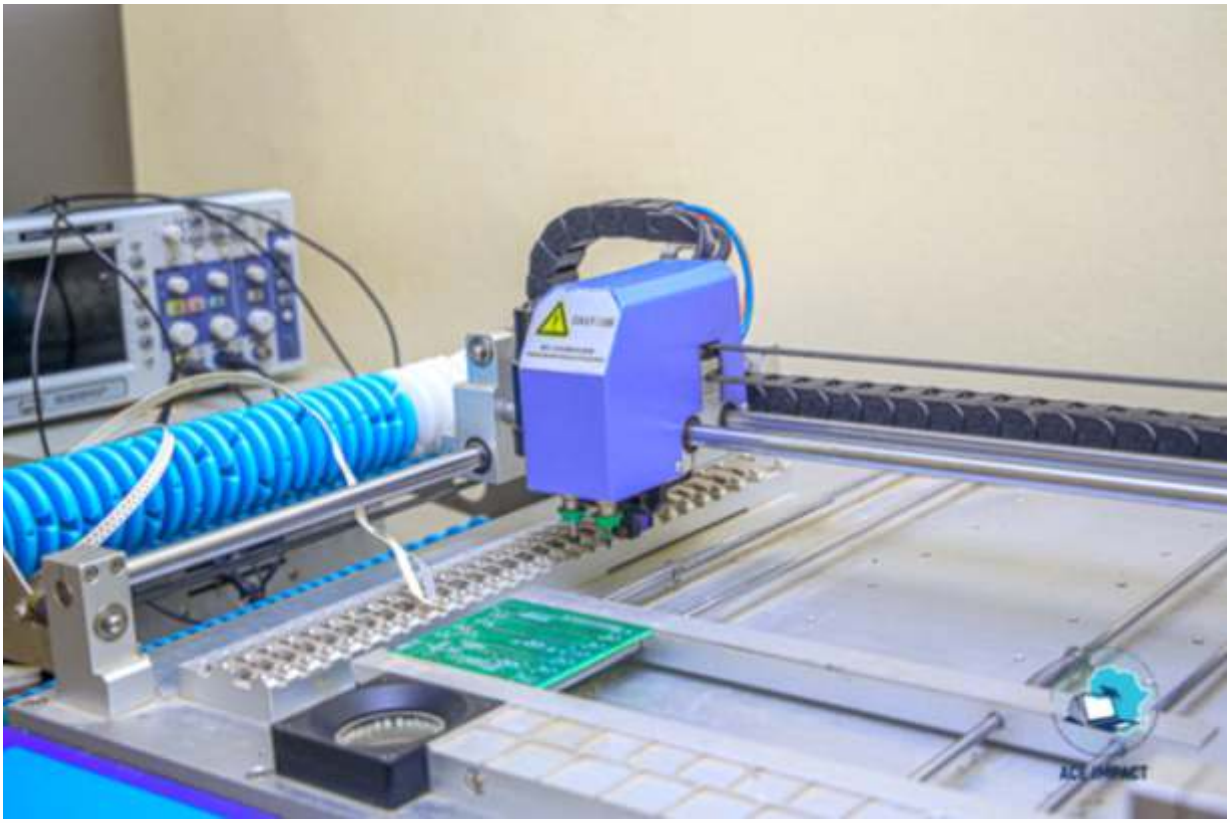





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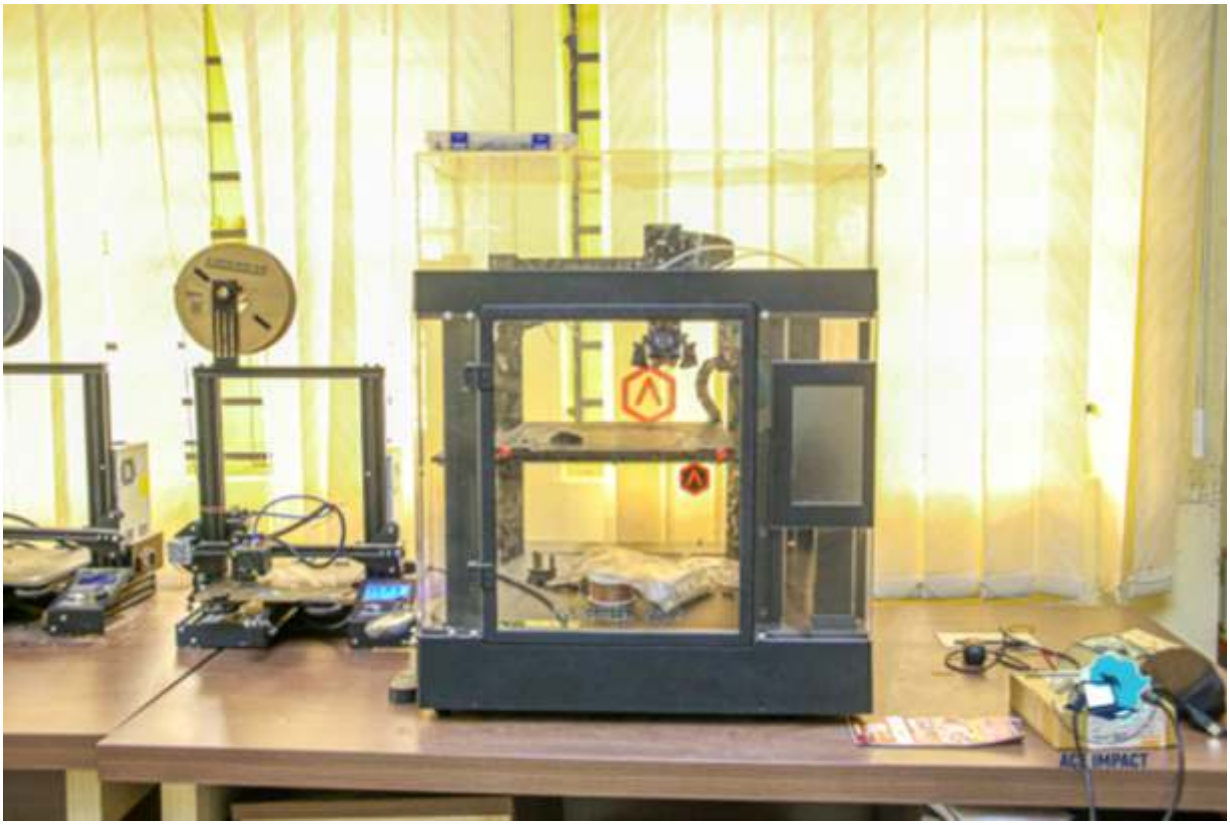

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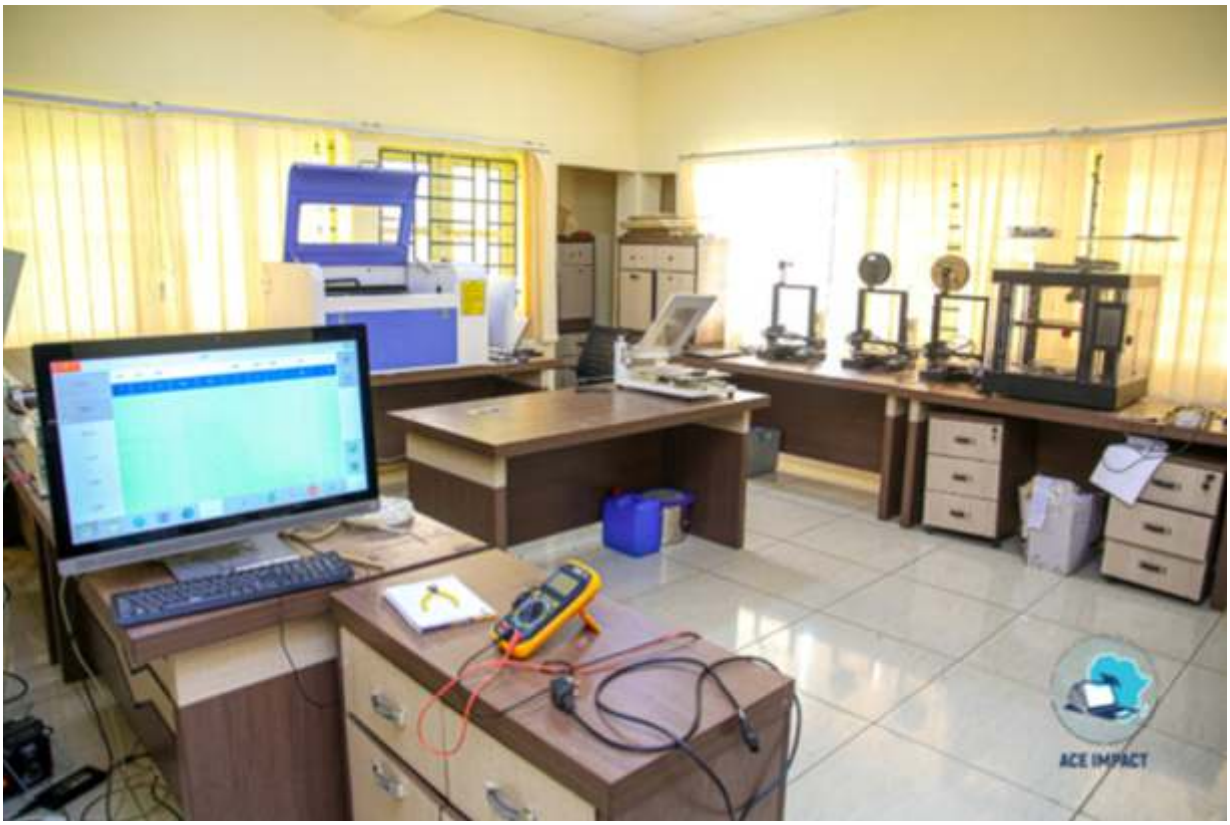





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OAU ICT-DRIVEN
KNOWLEDGE PARK
INCUBATION CENTRE
PUSH
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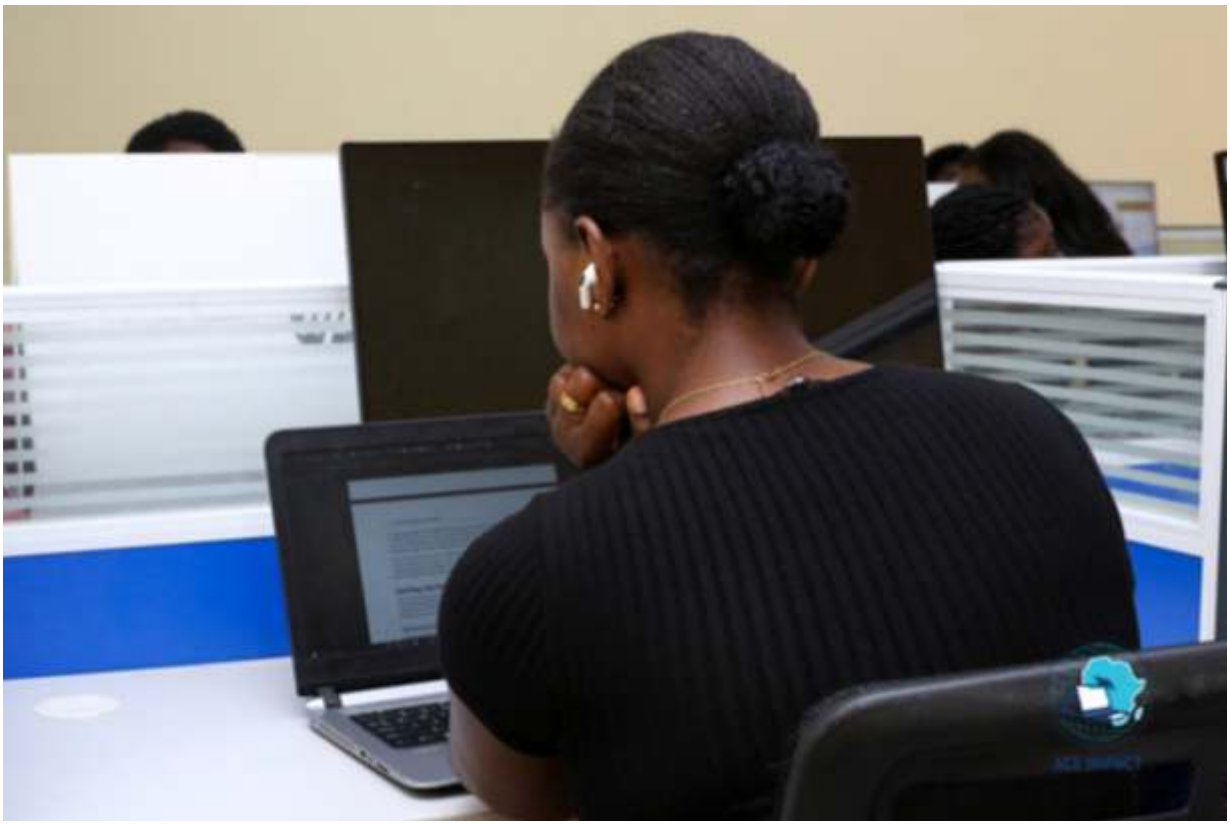



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ACE-CEFOR

UNIVERSITY OF PORT-HARCOURT

CENTRE FOR EXCELLENCE ON OILFIELDS CHEMICAL RESEARCH (CEFOR)

Introduction

Nigeria is a key player in the global oil and gas market. It is the largest producer of oil in Africa and 16th in the world with a daily estimated production of 1.4 million barrels per day. Oil provides a substantial part of the government revenue primarily through export and also contributes nearly 6% of the country's GDP. Ensuring greater efficiency of the oil and gas sector is therefore essential for national development due to the linkage between the industry and various other sectors of the economy.

Objectives

The Africa Centre of Excellence in Oilfield Chemicals Research (ACE-CEFOR) was established with the aim of supporting the growth of the oil and gas sector in the country. Key priority areas include the promotion of home-grown and regional research networks; development of manpower and human capacity; filling the gap for specialised skills in the industry; and addressing emerging challenges of the sector. The Centre will serve as a key partner to the oil and gas sector in providing short and long-term training and education programmes and research.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in PhD	27	12	12	5	99	40	24	5
Enrolment in Master's Programmes	39	17	17	7	356	137	6	1
Enrolment in Short Courses	107	47	46	20	1466	1542	113	34
Internships	64	27	27	12	190	95	5	1

DESCRIPTION	NATIONAL	INTERNATIONAL
Patents	13	-
Partnerships	12	8
Accreditations	16	-
No. of Publications (journals, etc.)	211	

REVENUE ($)	Target	Actual
	972,000	1,610,587

PROJECT COSTS ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	5,020,532	5,337,421	5,337,421	100

DLI PER%)

DLI																						
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		100		100				100			100			100				100					

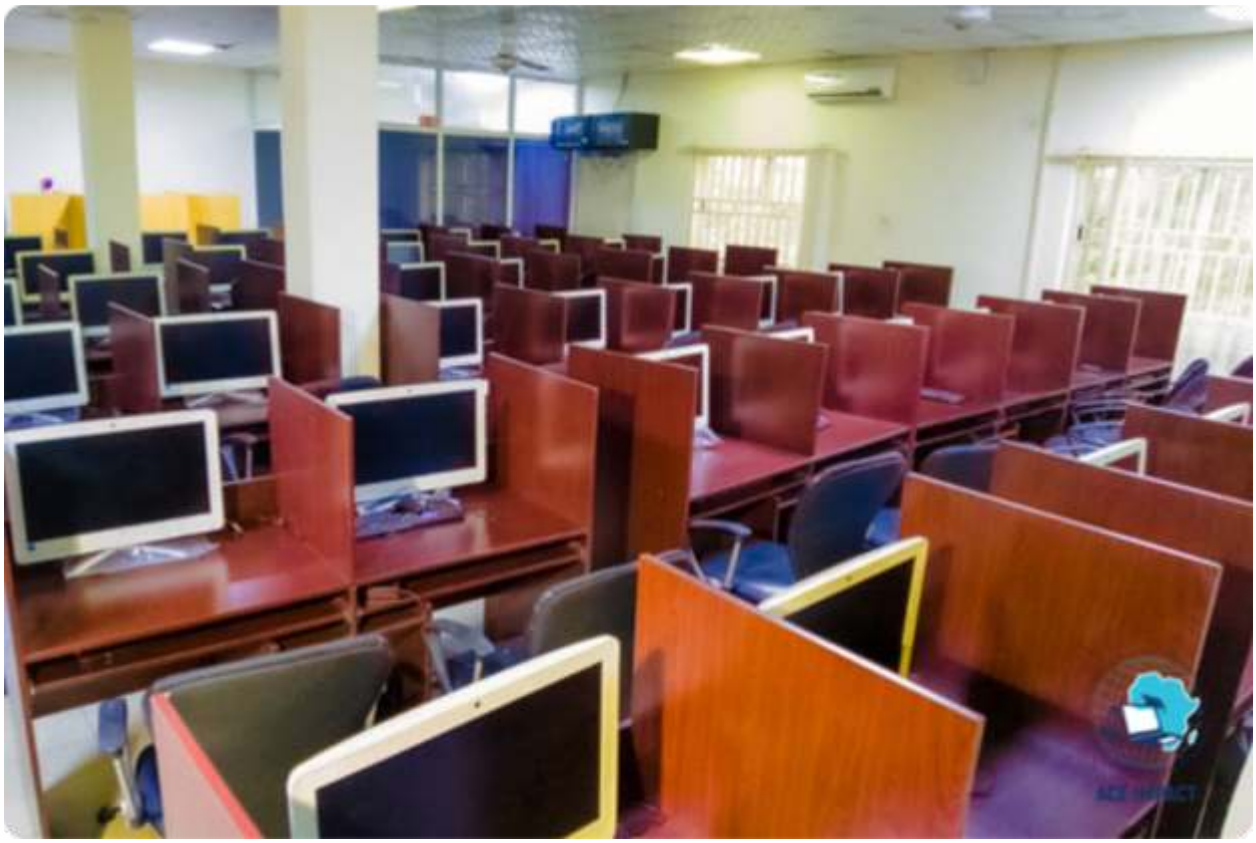
Apart from Nigeria, the Centre hosts regional students from Cameroun, Benin Republic, Ghana, Côte d'Ivoire, Kenya and Namibia. Working closely with its parent institution, a strategy was developed to enhance regional partnerships, research priorities and infrastructural development.
A number of workshops and similar gatherings were conducted to further enhance the experiences of the participants in the programmes of the Centre. These include those on Intellectual Property Management, Grant Writing and Laboratory Best Practices.

The alumni of the institution are helping to fill skills gaps in both academia and industry. In the academic and research arena, the shortage of academic staff with doctoral degrees to support the strengthening of academic programmes in the oil and gas fields across Nigeria and West Africa is gradually being addressed through the graduates of the programmes of the Centre. Master's and doctoral degree programmes have been launched in Oilfield Chemistry, Oilfield Biology, Offshore Oilfield Science & Blue Economy, and Process Engineering. The Centre maintains excellent communication with its alumni to enhance collaboration in further strengthening and sustaining its work and impact.

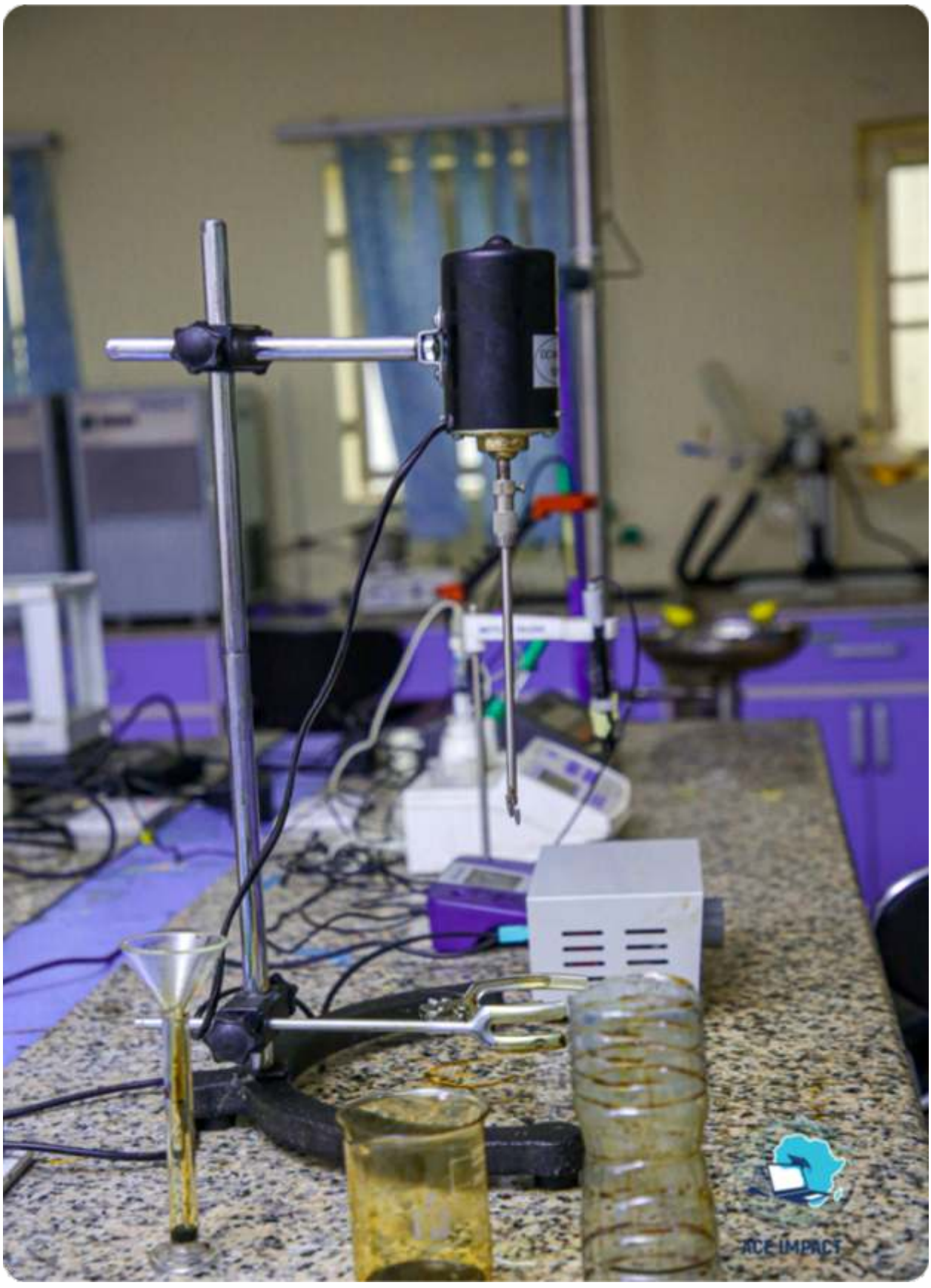
GALLERY OF FACILITIES AND ACTIVITIES

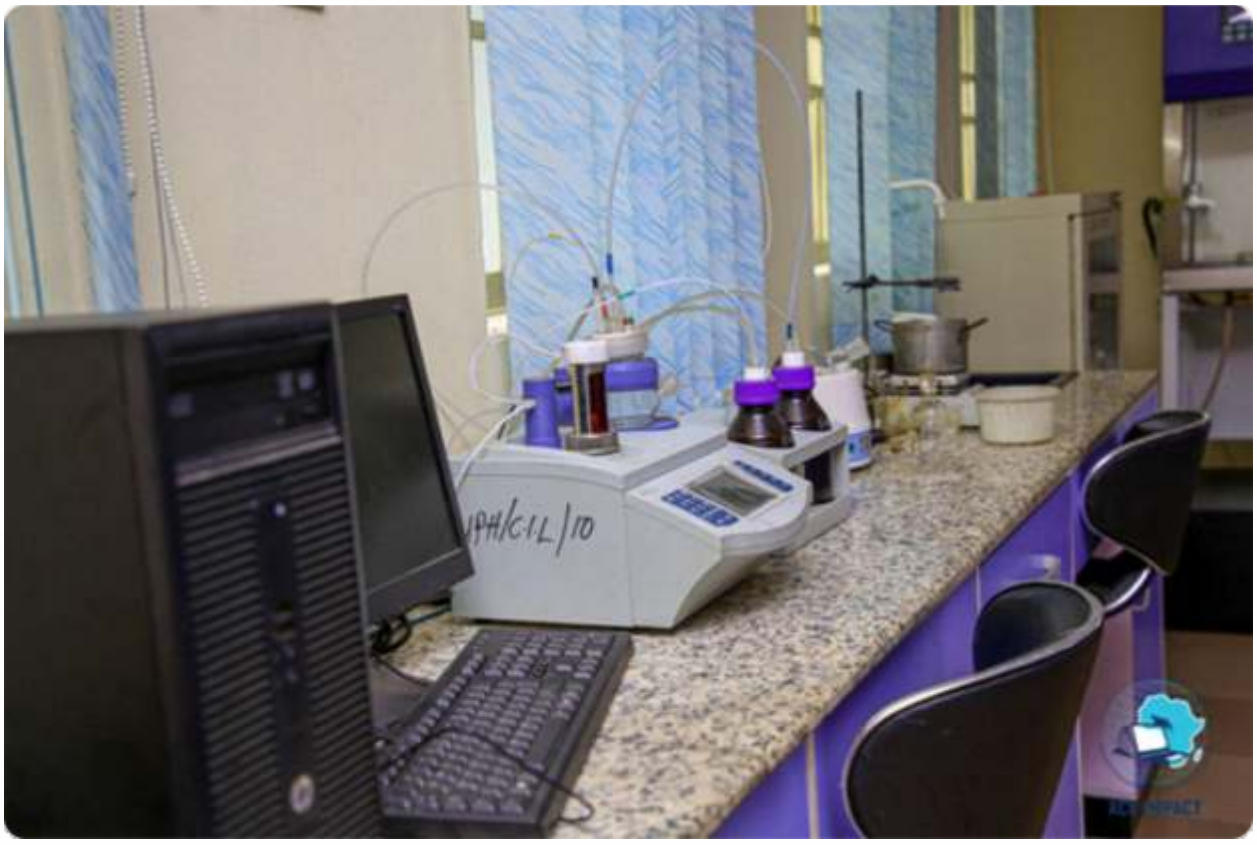







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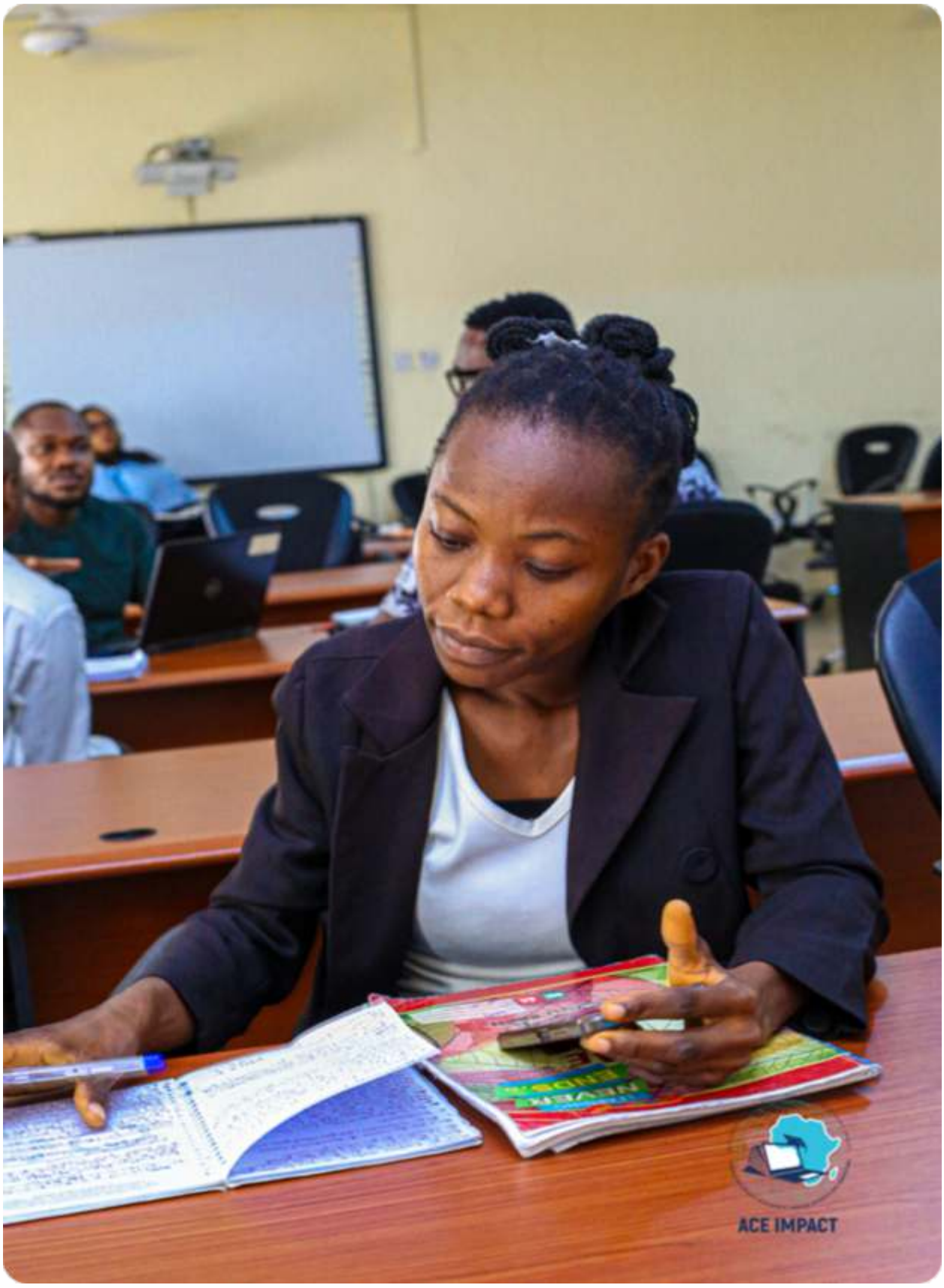

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UNIVERSITY OF PORT-HARCOURT
CENTRE OF EXCELLENCE FOR PUBLIC HEALTH AND TOXICOLOGICAL RESEARCH (ACE-PUTOR)

Introduction

Nigeria continues to face significant public health challenges due to poor environmental regulations and standards. Across the country, diverse activities from individuals and groups expose the population to harmful substances that impact public health. Indiscriminate mining activities, pesticides, electronic waste, industrial activities, and a number of others combine to create hazardous outcomes. These continue to increase the number of the population that face severe health challenges, for which many may not be aware of the origin due to lack of knowledge of the environmental hazards faced across Nigerian communities.

Objectives

Specific objectives of the Centre include:

- Training of students and technical experts/policymakers through short courses on relevant public health and toxicological issues in the region;
- Training national and regional masters' students in the focus areas;
- Training national and regional students to obtain PhD in the focus areas; and
- Developing regional research capacity to support focused interventions on development challenges

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	18	12	8	4	88	195	44	19
Enrolment in Master's Programs	46	24	16	12	27	584	27	25
Enrolment in Short Courses	60	40	27	23	68	304	44	216
Internships	25	20	5	7	65	166	23	58

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents		
Partnerships	**26**	**8**
Accreditations	**9**	**8**
No. of Publications (journals, etc.)	61	

REVENUE ($)	Target	Actual
	838,000	**1,685,945**

PROJECT COSTS ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	6,000,000	7,149,371	6,374,144.43	89.16

DLI PERFORMANCE (%)

DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
100		200		100	100	100		100	100	100	100	100	100	100	100	100				100		100	100

The Centre's programmes are set and strengthening the stage for environmental standards in the region. Its facilities, which include critical laboratories with cutting-edge equipment, such as the digital skills laboratory, clinical simulation laboratory, nursing skills laboratory, public health skills laboratory, toxicology laboratory are ensuring academic programmes relevant to skills development in the sector. The laboratories of the Centre are also sources for revenue, which support sustainability. Partnerships and linkages with agencies of government are stepping stones towards better environmental standards for the region as officials became aware of the need to promote public health through the enforcement of rules. Programmes of the Centre were further strengthened through partnership with external organisations, helping to strengthen the delivery of trainings.

GALLERY OF FACILITIES AND ACTIVITIES








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KOJAK
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THE SKELETAL SYSTEM
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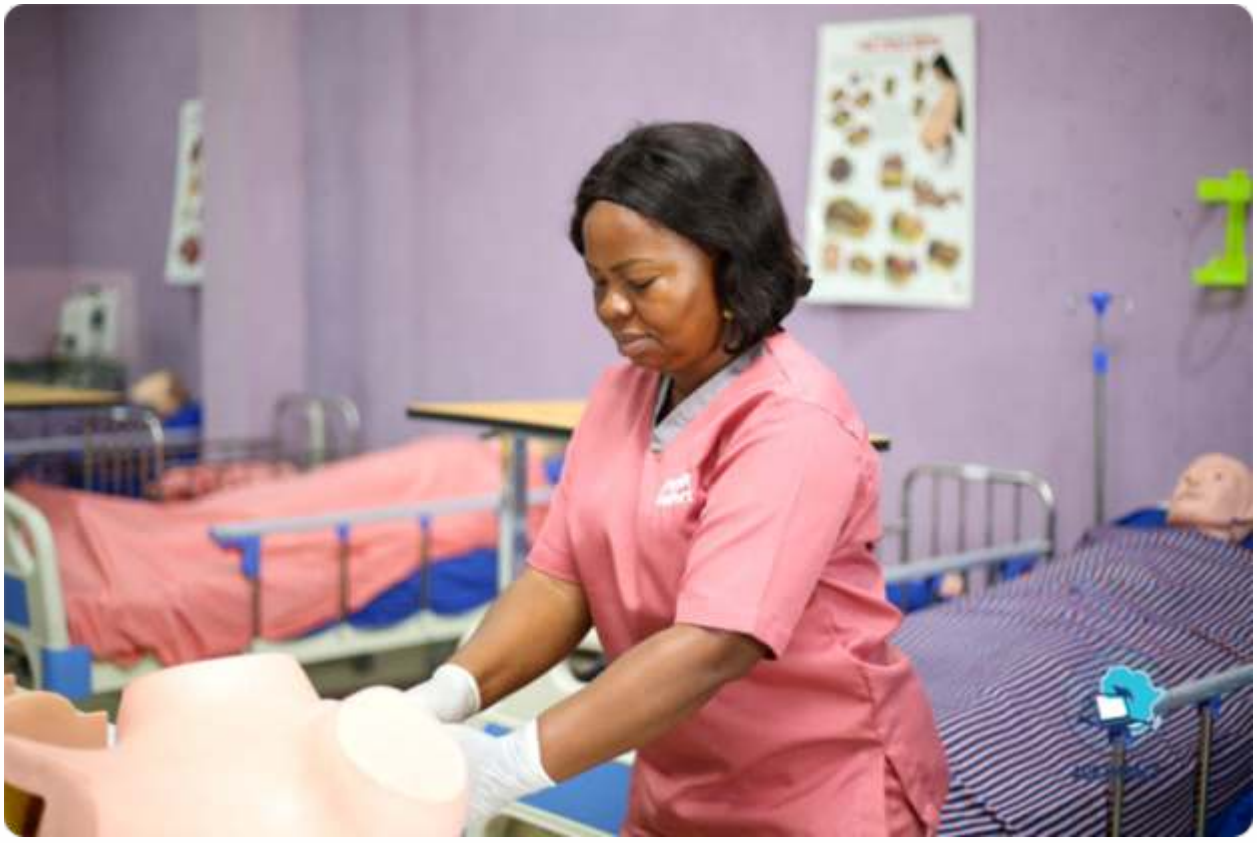

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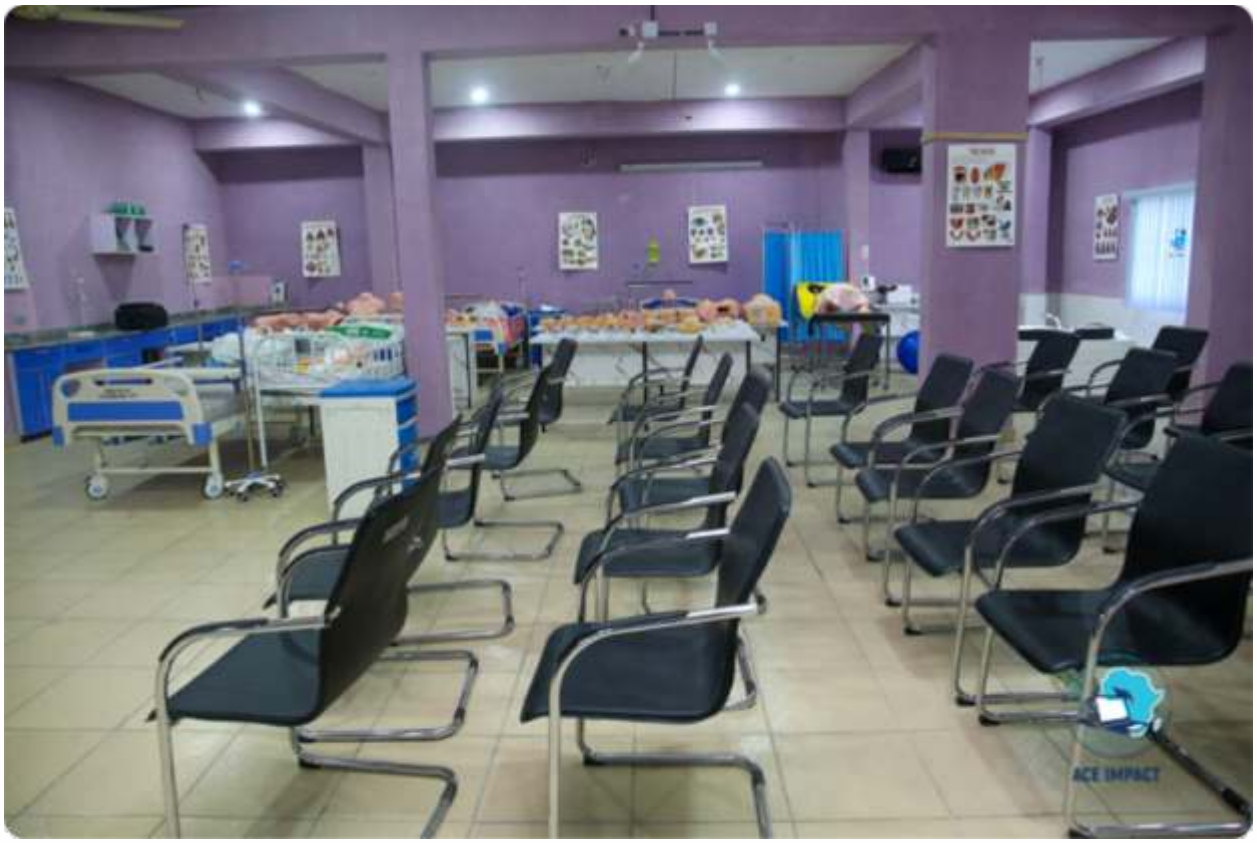

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INFANT INCUBATOR
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INFANT INCUBATOR
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HEMATOCRIT CENTRIFUGE SH120
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BIOBASE
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BAYERO UNIVERSITY, KANO

CENTER OF EXCELLENCE FOR POPULATION HEALTH AND POLICY (ACEPHAP)

Introduction

Countries such as Nigeria, with its prevailing health challenges, need effective population health and policy to enhance efficient efforts towards surmounting the problem. This will help to improve healthcare across communities, ultimately ensuring that a greater number of citizens are healthy, productive and can participate in diverse economic activities to promote development. Such policies, coupled with adequate manpower, will enhance national competitive standing.

Objectives

The Centre aims to strengthen interdisciplinary approaches to promote population health outcomes through training and research for evidence-informed policy development in West and Central Africa. Of particular interest to the centre is the challenge faced by the population in its immediate environment including maternal mortality, infectious diseases and health-system gaps.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	50	30	30	20	14	7	0	0
Enrolment in Master's Programmes	129	63	42	21	119	56	59	28
Enrolment in Short Courses	40	20	20	10	285	140	134	66
Internships	179	93	72	41	134	63	59	28

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	0	0
Partnerships	14	23
Accreditations	4	2
No. of Publications (journals, etc.)	256	

	Target	Actual
REVENUE ($)	1,365,256	4,883,902.90

PROJECT COSTS ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	$6,000,000	$6,650,365	$5,686,265	86%

DLI PERFORMANCE (%)

DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
				26	89	100		100	100	100	100	100	100	100	100	100	100			100		100	100

Emphasising the fact that it was never intended as an ivory-tower institution, the Centre has been prolific in diverse activities to attain its objectives. Its training programmes have brought about the development of high-level manpower, with graduates holding leadership positions not long after graduation. Two patent applications were made as well as four product prototypes. Its COVID-19 risk-communication toolkit—translated into six local languages—was adopted by three of Nigeria's northern states at the height of the pandemic. Its partnership and collaboration programmes that cut across various countries have continued to strengthen its training and research activities. The rehabilitation and upgrading of laboratories, training on grant-writing, and strengthening of diverse systems have supported the work of its parent institution in improving quality outcomes. In line with progress made and the expectations of the wider society, the Centre, as part of its sustainability plans, is working on a Sahel Doctoral Mobility Scheme and gender-responsive PhD and an Innovation & Implementation Science Hub to help commercialise prototypes.

The Centre is widely viewed, at home and abroad, as a go-to source for evidence-driven solutions and advanced public-health training. Research output has been excellent, with these featuring in many high-impact journals. Flagship among them is the **E-MOTIVE package** for postpartum haemorrhage management, already cited in WHO guidance and piloted in a dozen Nigerian hospitals. Beyond maternal health, investigators have published decisive work on nutrition, antimicrobial resistance, and health-service quality, ensuring the Centre speaks to the full SDG-3 agenda.

GALLERY OF FACILITIES AND ACTIVITIES






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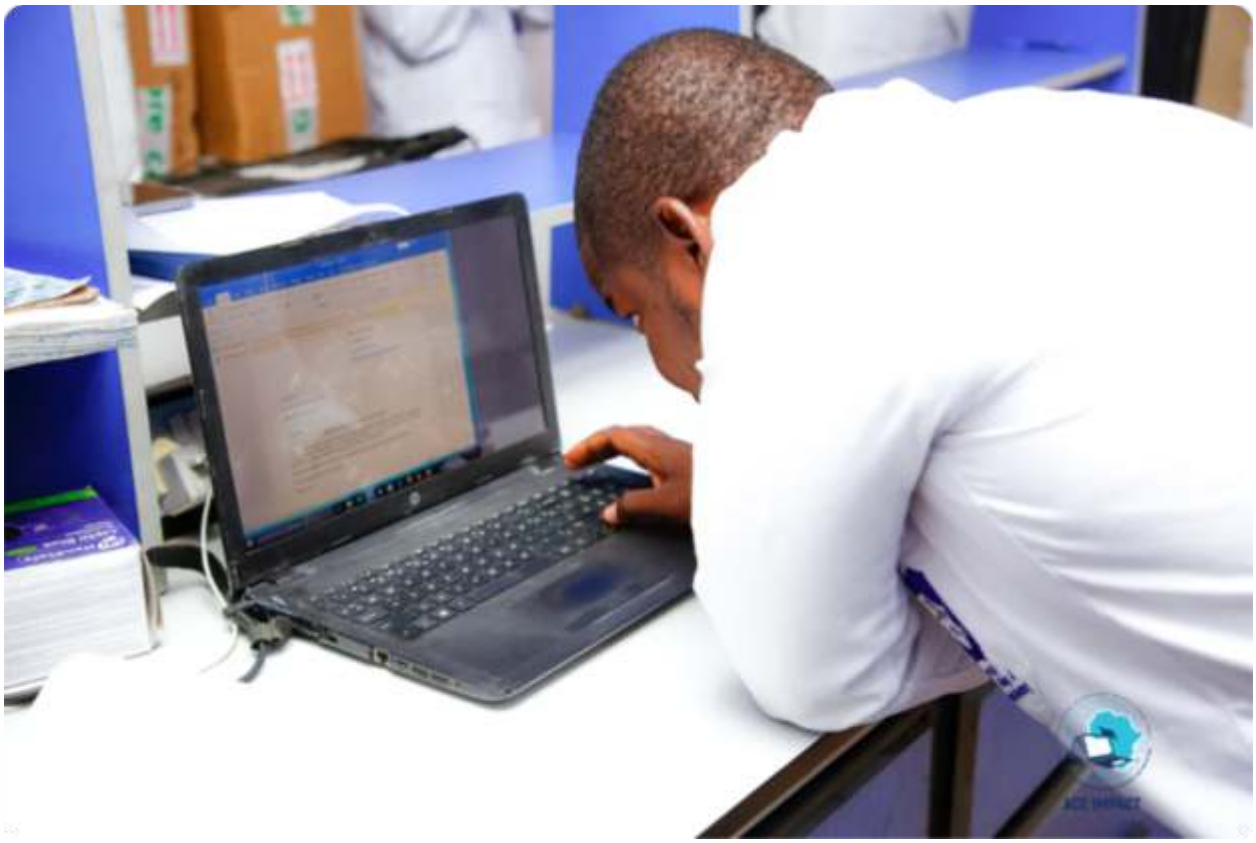



BUK-PHP


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PELI
BioThermal


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ACE IMPACT


BIOBASE
ACE IMPACT


ACE IMPACT


hydro-box




ACE IMPACT


BIOBASE


ACE IMPACT




BIOBASE


WARNING


ReadyMED
Nutrient Agar
Chaitanya
ReadyMED
Dehydrated Cell Culture Media
Tinsdale Agar
Chaitanya
FLUID THIOGLYCOLLATE
MEDIUM


ACE IMPACT


TRANSLATING RESEARCH FINDINGS
IMPLEMENTATION THE E-MOTIVE
Randomized Trial of Early Detection and Treatment of Postpartum Hemorrhage
M O T I V E
CLINICAL TRIAL
POLICY ACHIEVEMENTS
RESULTS
jhpiego
IMPLEMENTATION STRATEGIES
CONCLUSION
ACE IMPACT


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ACE IMPACT











COVENANT UNIVERSITY

CENTRE OF EXCELLENCE FOR APPLIED INFORMATICS AND COMMUNICATION (CAPIC)

Introduction

Addressing healthcare challenges in Nigeria and the wider Sub-Saharan Africa requires sustained access to relevant information. There is also a need for appropriate local manpower with the knowledge to support research across diverse institutions. This will further support efforts by national and regional organisations in improving healthcare to enhance productivity and economic growth.

Objectives

The Centre of Excellence for Applied Informatics and Communication (CApIC) was established to build a critical mass of national and regional postgraduate researchers in bioinformatics, cheminformatics, biochemistry, computer science, microbial genetics, and biotechnology and information and communication engineering. The Centre's focus was directed towards solving regional health and computing challenges, particularly in malaria, prostate and breast cancer, and high-performance cloud computing (HPC).

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	32		8		6	32	2	3
Enrolment in Master's Programs	98		25		39	68	14	7
Enrolment in Short Courses	120		30		67	35	129	42
Internships	165				161		7	

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Partnerships	**20**	**10**
Collaborations	**37**	**34 (Regional)**
Accreditations	**8**	**2**
No. of Publications (journals, etc.)	71	

REVENUE ($)	Target	Actual
	883,000	984,214.28

PROJECT COSTS ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	6,000,000	6,731,743	6,726,982	99.9

DLI PERFORMANCE (%)

DLI																					
1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
100	100		99.5				100			100			100				100					

The Centre has been a key player in the drive for sustainable approaches to addressing healthcare challenges in Nigeria and Sub-Saharan Africa. It established seven modern laboratories, including Cancer Genomics, Insectary, In vitro, Molecular Biology, Industrial Chemistry/Chemo informatics (NMR), FEDGEN 1, and FEDGEN 2. This are in addition to procuring high-end laboratory and ICT equipment, including a Sequencer, Bioanalyzer, RT-PCR, NMR and High-Performance Computers (HPCs). It was a key contributor to the development of national guidelines on cancer treatment and research. The activities of the Centre contributed to the internationalisation of its parent institution, placing it in the 801-1000 band in the THS global rankings and at number 1 in Nigeria and West Africa. Tracer studies indicated 80% of graduates secured employment or enrolled in further studies within six months of completing their programmes.
The Centre supported the emergence of three new academic disciplines, including Bioinformatics, Cheminformatics, Microbial Genetics, and Biotechnology.

Some Centre faculty members were inducted into the prestigious Nigerian Academy of Sciences, the African Academy of Sciences, the Royal Society of Biology and the West African Society of Toxicology. Two Centre Members were listed among the Top 100 AI Researchers in Nigeria by the Federal Ministry of Communications and Digital Economy. A Centre faculty member was appointed consultant to the National Institute for Cancer Research and Treatment (NICRAT).

GALLERY OF FACILITIES AND ACTIVITIES




RT PCR Machine



Bioanalyzer


Milli-Q
MilliQ water purification system


Cages


Insectary shelve


Cupboard showing Light traps and Nets










QIAGEN
QIAamplifier 96
Coventional PCR


MICROHEMATOCRIT CENTRIFUGE
SURGIFIELD MEDICAL ENGLAND






ESCO
Laminar Flow
Cabinet
OptiMAIR




DNM-9602 MICROPLATE READER


STUART


Thermo
SCIENTIFIC
37.0
0.0




Telstar
Bio II Advance Plus


OHAUS




Agilent







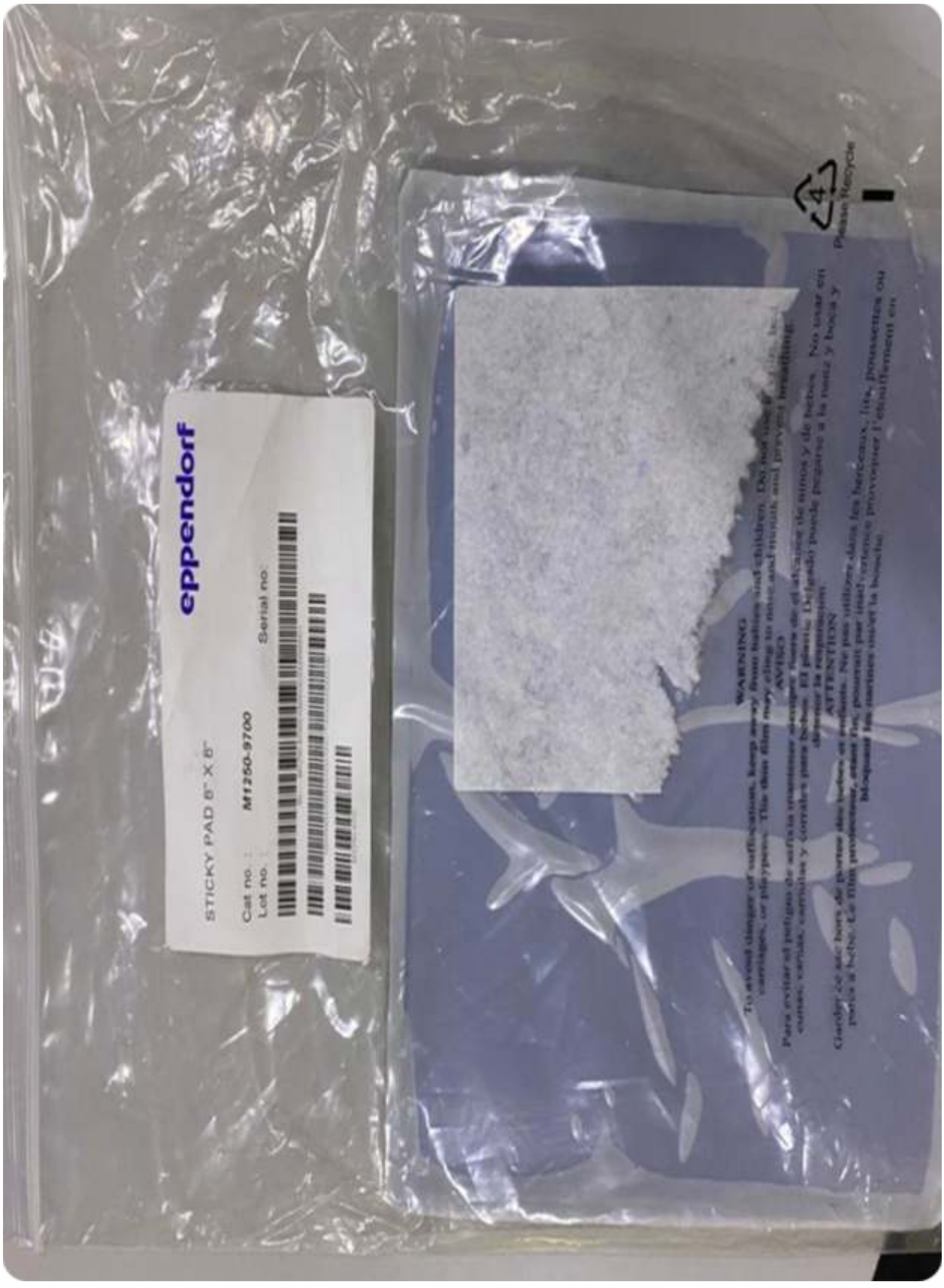



SP SCIENCEWARE
Prepare to Discover
PREPSAFE™ FLOATING MICRO TUBE RACK
CAT NO 187420001
QTY 1 EA / CASE


BRANSON


290
04
Thermo


Benchmark
Mix
Pause
Rock
THERM


eppendorf
STICKY PAD 6" X 6"
Cat no. M1250-9700
Lot no.
Serial no.
WARNING
AVISO
ATTENTION
Pelas Recycle















NATIONAL OPEN UNIVERSITY OF NIGERIA

CENTRE OF EXCELLENCE FOR TECHNOLOGY-ENHANCED LEARNING (ACETEL)

Introduction

Technology is the key driver for development in the 21st Century. It is a tool for enhancing and sustaining economic and social growth. In the education process, integration of technology enhances teaching, learning, research, and human development. The government and people of Nigeria have for long recognised the key role of technology in developing and sustaining an education system that targets national development objectives. Though efforts are continuously being made by governments and organisations towards technology integration in education, challenges still abound, leading to a greater digital divide. There are still the challenges of infrastructure and human resources. The education system, therefore, continues to be challenged due to poor application of technology.

Objectives

The Centre of Excellence for Technology-Enhanced Learning (ACETEL) focuses on the development of human capacity and research in digital solutions that will lead to the utilisation of technology for education and its deployment to other sectors. A key goal of the Centre is to bridge the technology knowledge gap by building capacity in Information Communication Technologies, Cyber Security and Digital policies. This is to achieve high levels of digital development in Nigeria and the wider African Continent.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	82	51	37	25	76	10	4	1
Enrolment in Master's Programmes	101	56	36	32	72	22	33	4
Enrolment in Short Courses	505	233	186	119	256	112	95	44
Internships	215				168	9	13	5

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	**0**	**0**
Partnerships	**17**	**18**
Accreditations	**6**	**6**
No. of Publications (journals, etc.)	18	47
Conferences	9	17

	Target	Actual
REVENUE ($)	479,192	**155,444.82**

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	6,000,000	6,000,000	6,135,000	100

DLI PERFORMANCE (%)

DLI																								
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
100		87		100	100	100		100	68	100	100	100	100	100	100	100	100			100		100	100

The Centre, leveraging the role of its parent institution as the premier Open and Distance Learning institution in Nigeria, has developed various teaching, learning and research programmes to support the integration of technology in education. These include computer applications that will, in the long run, support teachers and learners in formal settings as well as in open and distance learning. Its laboratories also serve as centres for teaching, learning and research. Collaborations with industry continue to be a source of materials and applications to enhance technological integration in education.

ACETEL delivers its teaching through a blend of synchronous and asynchronous facilitation methods designed to enhance both academic engagement and real-world relevance. Through synchronous facilitation, virtual sessions are conducted in real time using case studies and practical exercises, enabling interactive collaboration between students and facilitators from both academia and industry. This real-time engagement bridges the gap between theoretical knowledge and industry practice. In parallel, asynchronous facilitation allows learners to access course materials, read and respond to discussion posts—including facilitator feedback—and carry out guided self-study at their convenience. This flexible model supports diverse learning paces and schedules, especially in an Open and Distance Learning (ODL) environment. All learning activities are hosted on ACETEL's customised Moodle Learning Platform (www.elearn.edu.ng), which integrates core learning resources, student databases, supplementary materials from Coursera, discussion forums, and assessment tools. Together, these approaches foster inclusive, flexible, and industry-relevant learning.

ACETEL engages with academia, the private sector, and partners to conduct research and ensure alignment of its research with industrial and community needs. Right from the research conceptualisation, the Centre focused on the commercialisation of its research output. Through ACETEL the university is funding five faculty research projects targeted at addressing challenges identified in the conduct and delivery of ODL in the system. Some of these researches are conducted in partnership with the industry (African Language Technology Initiative ALT-i Ltd.) An example is Exploring the Building Blocks of a Virtual Laboratory for CHM 19. There is also a PhD research co-funded by the trio of industry, ACETEL and DSTN – Enhanced Technical Education for People with Visual Impairment Using Artificial Intelligence.

Several other research activities are being carried out by the Centre with emphases on impact on the broader society in the integration of technology in teaching, learning, research, and community service.

GALLERY OF FACILITIES AND ACTIVITIES








ACE IMPACT



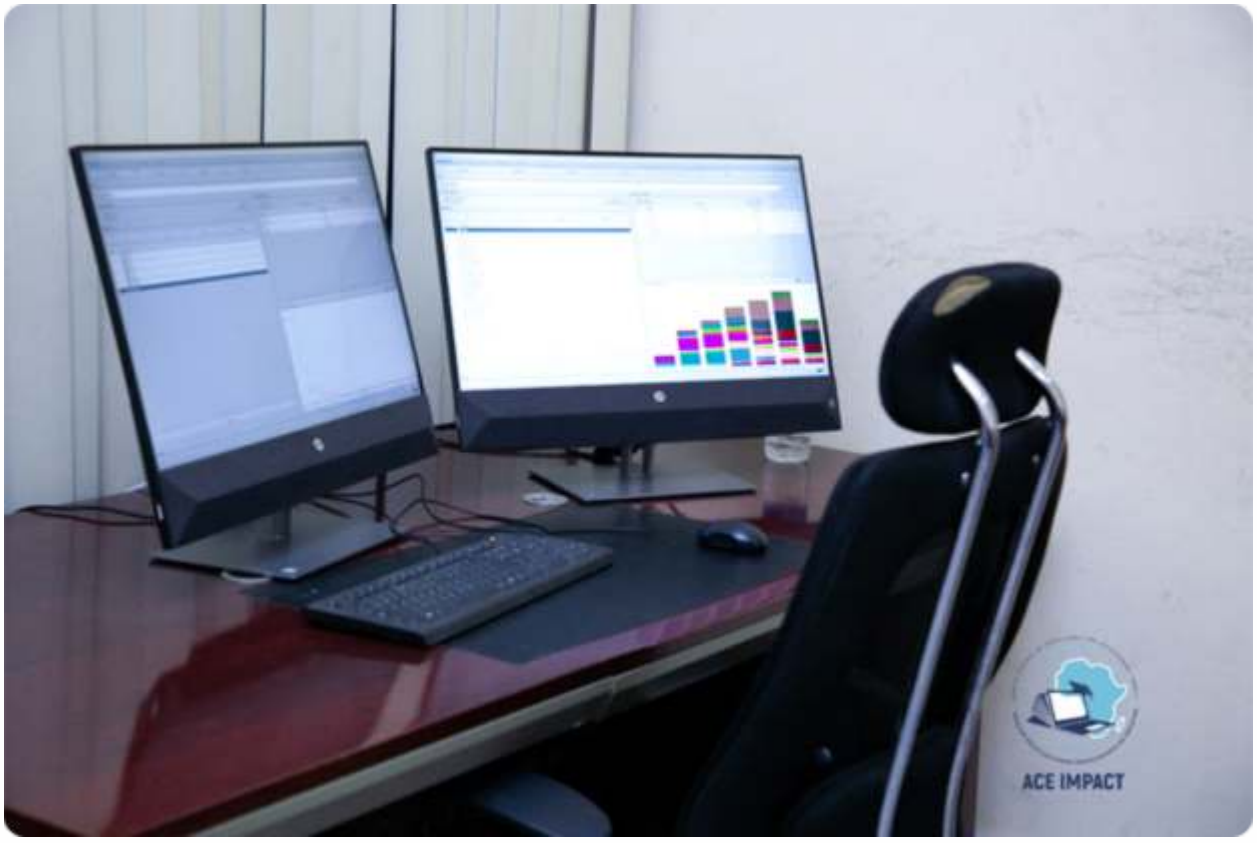

ACETEL-CISCO ACADEMY

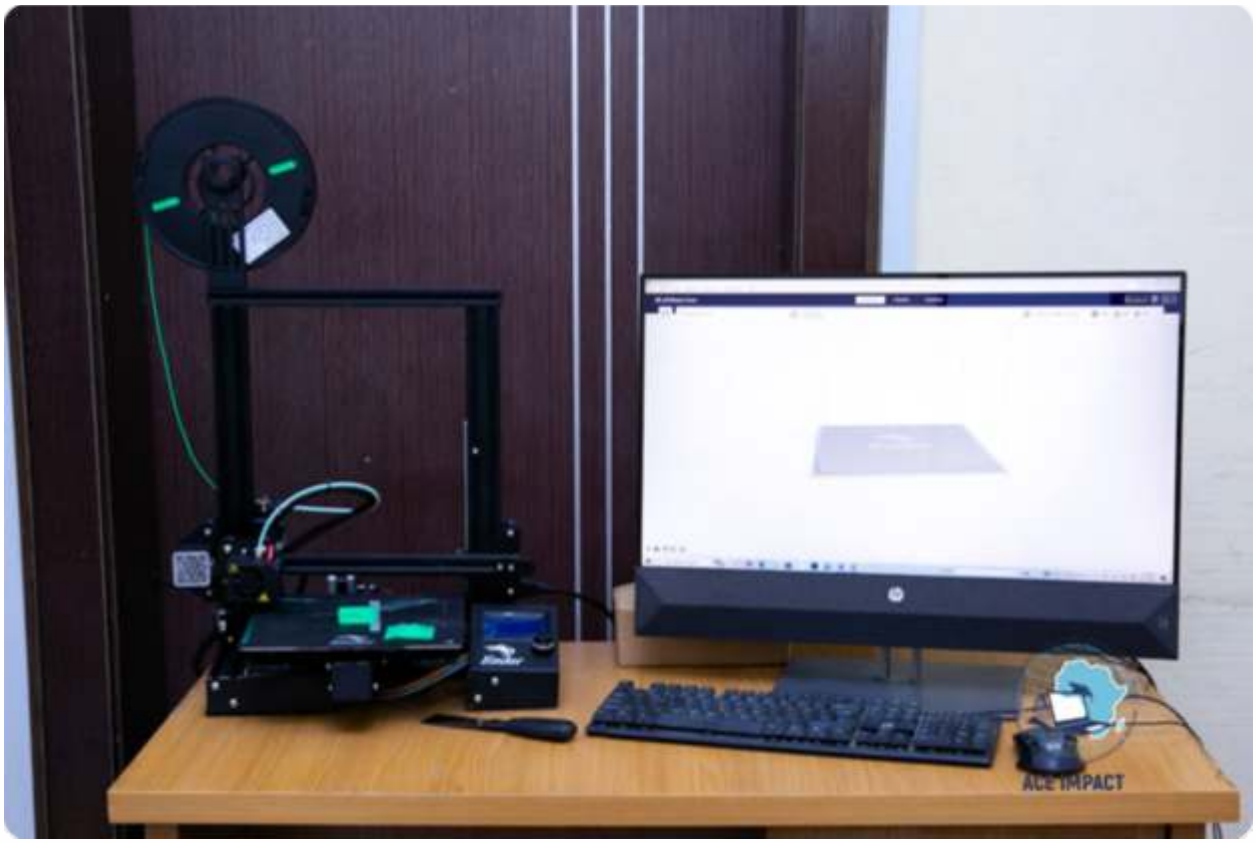

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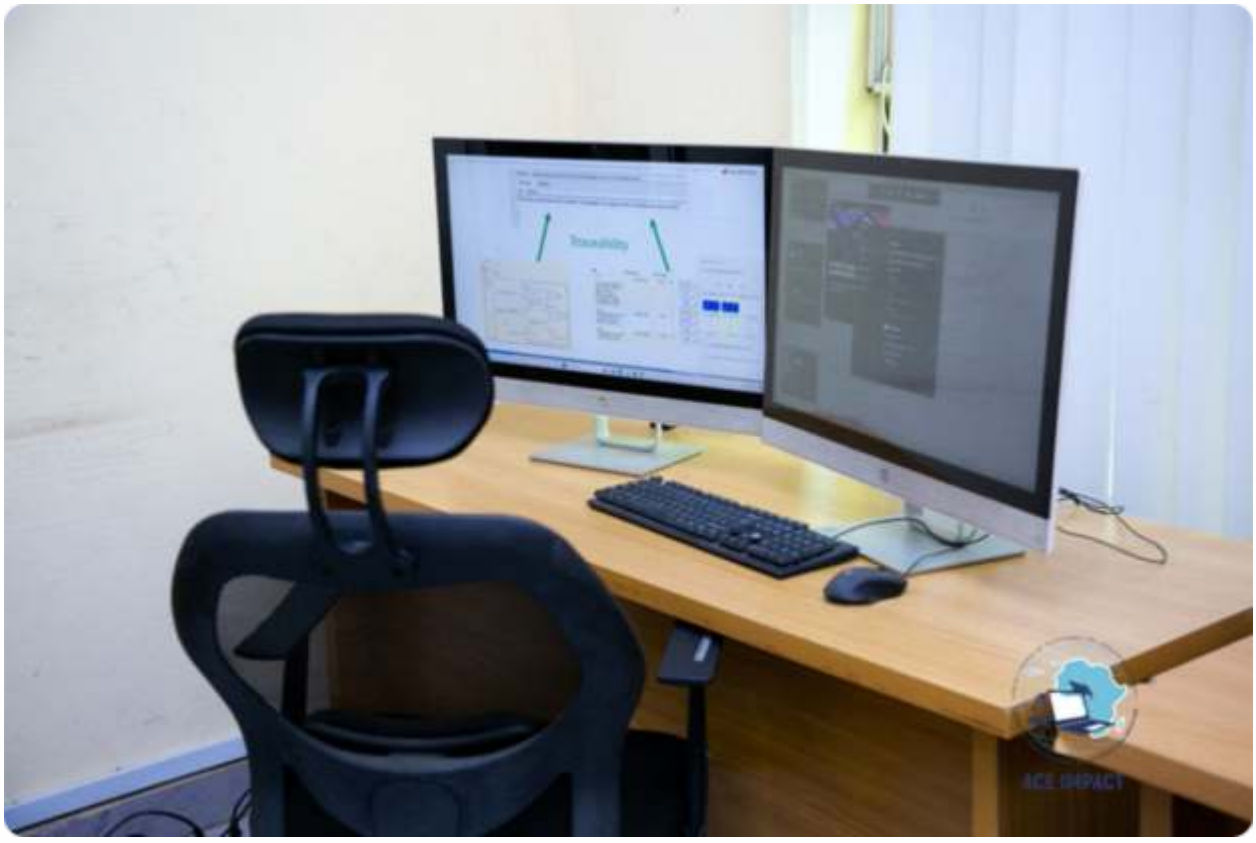

VIRTUAL
REALITY LABORATORY
VIRTUAL
REALITY LABORATORY
outdoor
speakers


OneDrive
Play Store
Messages
Camera
Settings
Calendar
Assistant
Smart Switch
LinkedIn
Find Device
REALITY
ACE
Reality in the


ACE IMPACT


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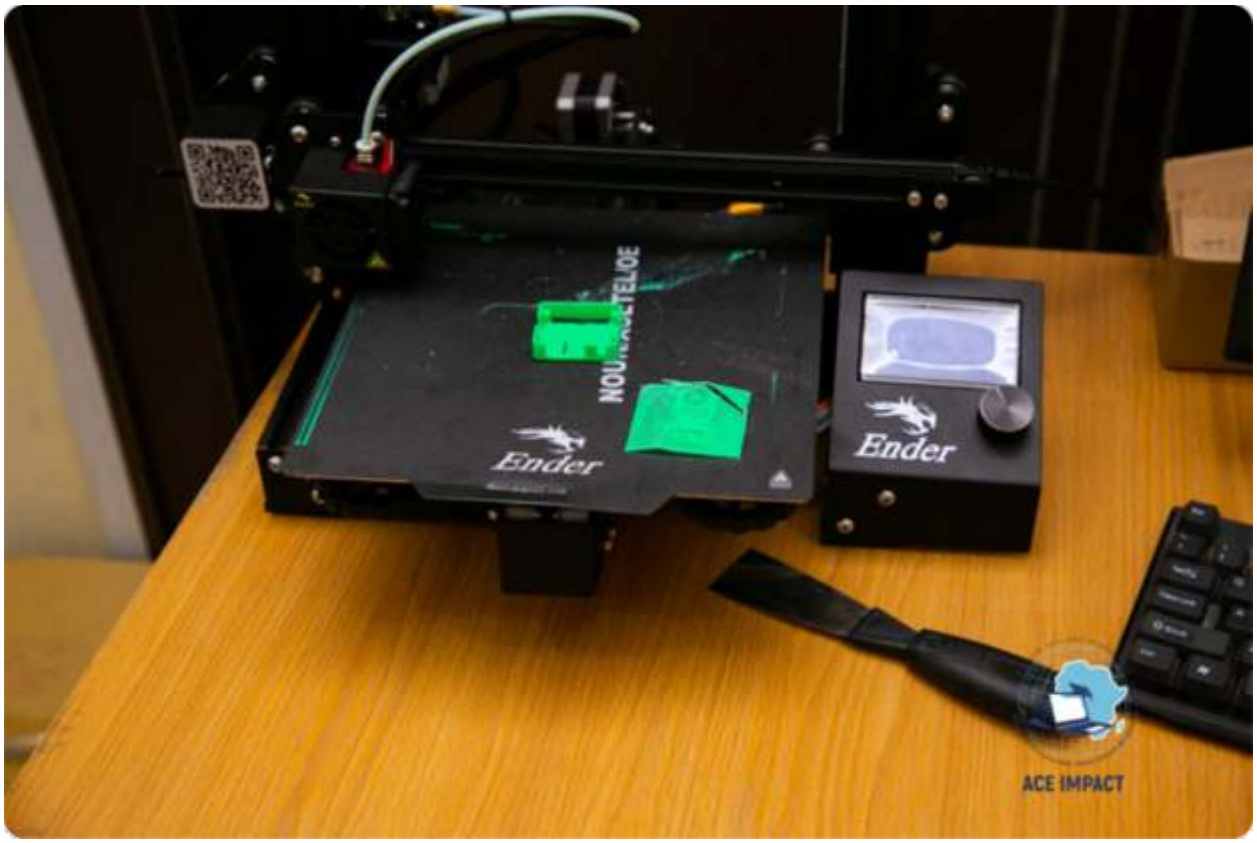

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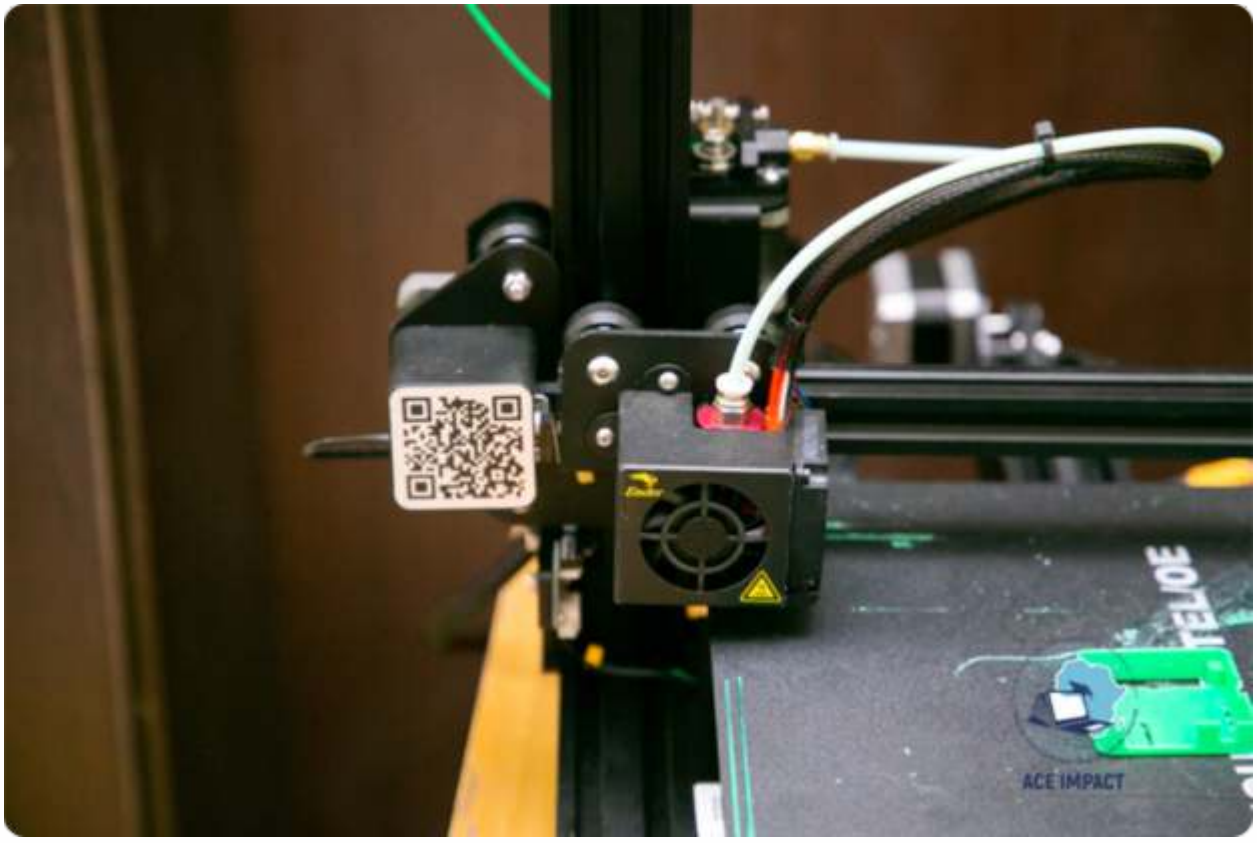

ARTIFICIAL
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LABORATORY
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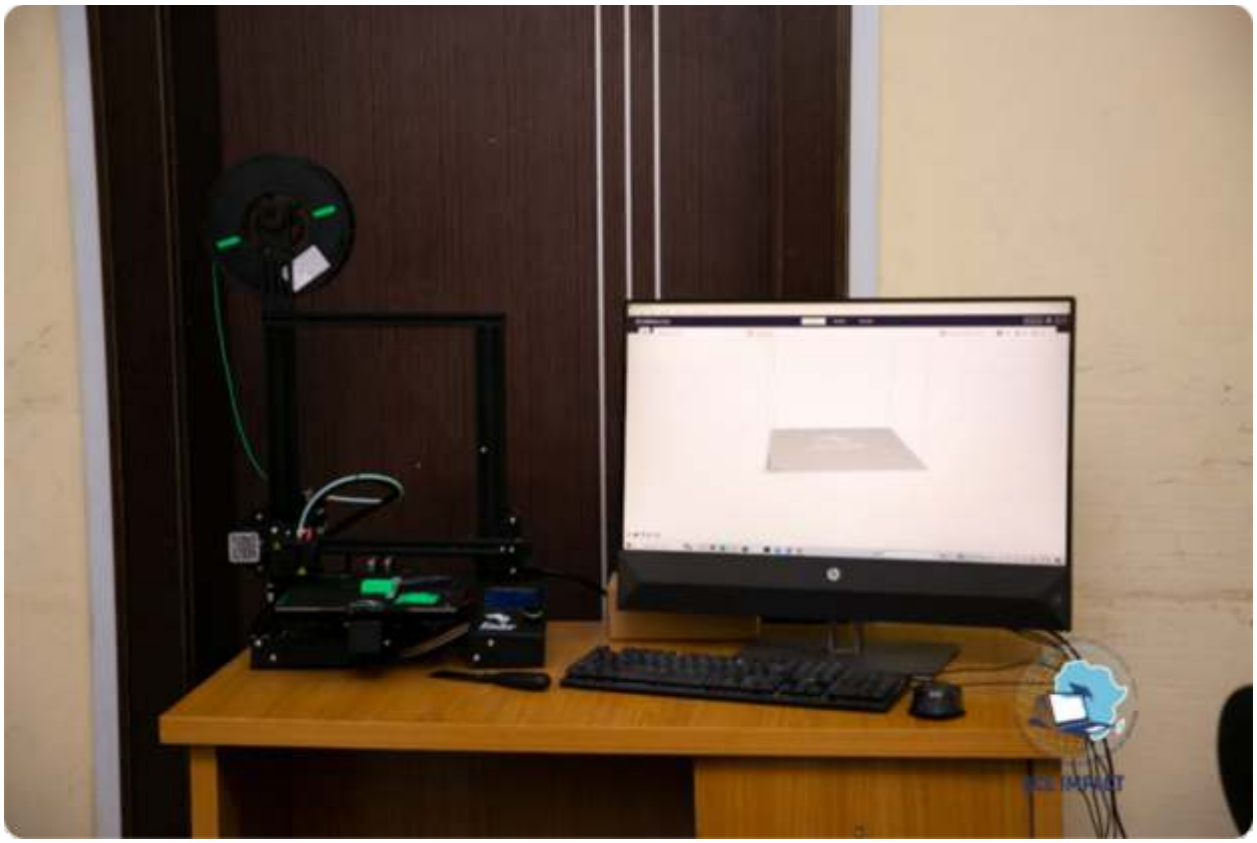

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Traceability
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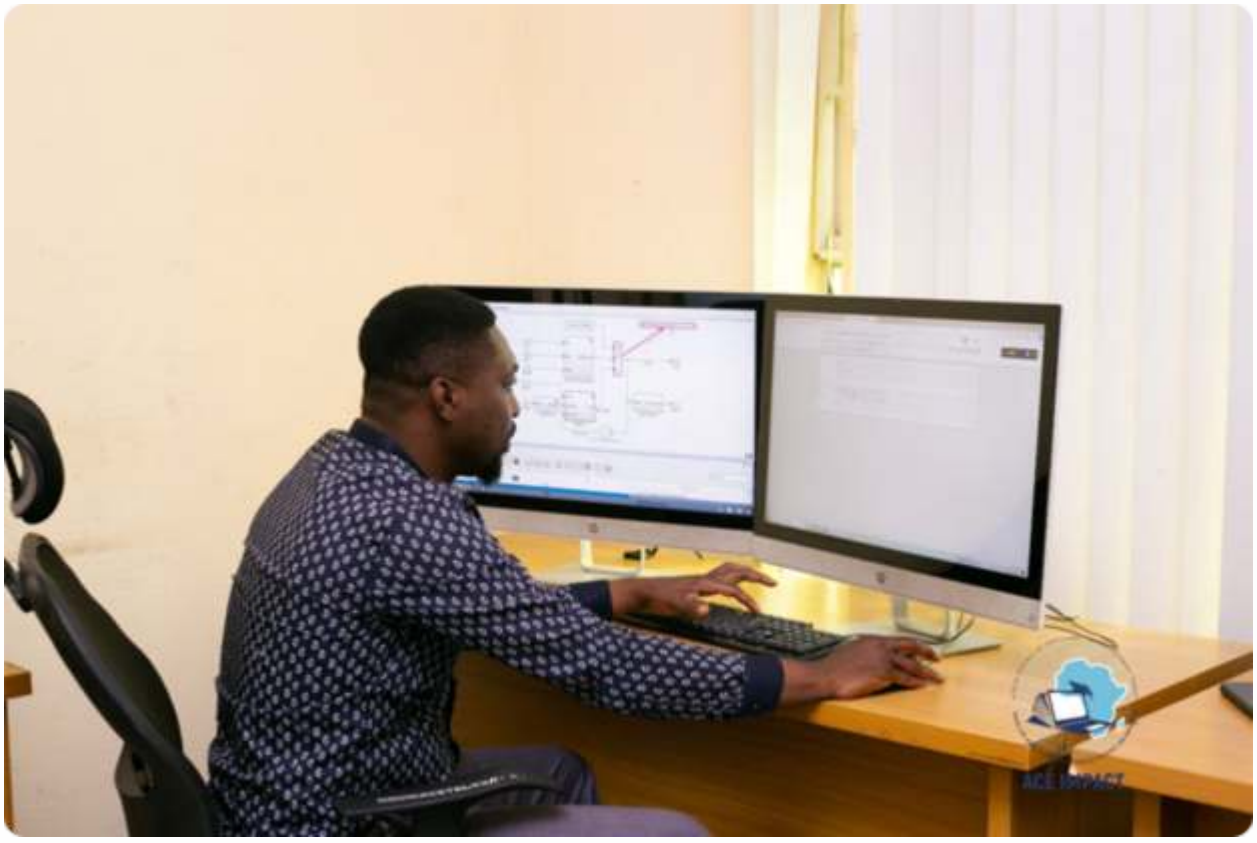

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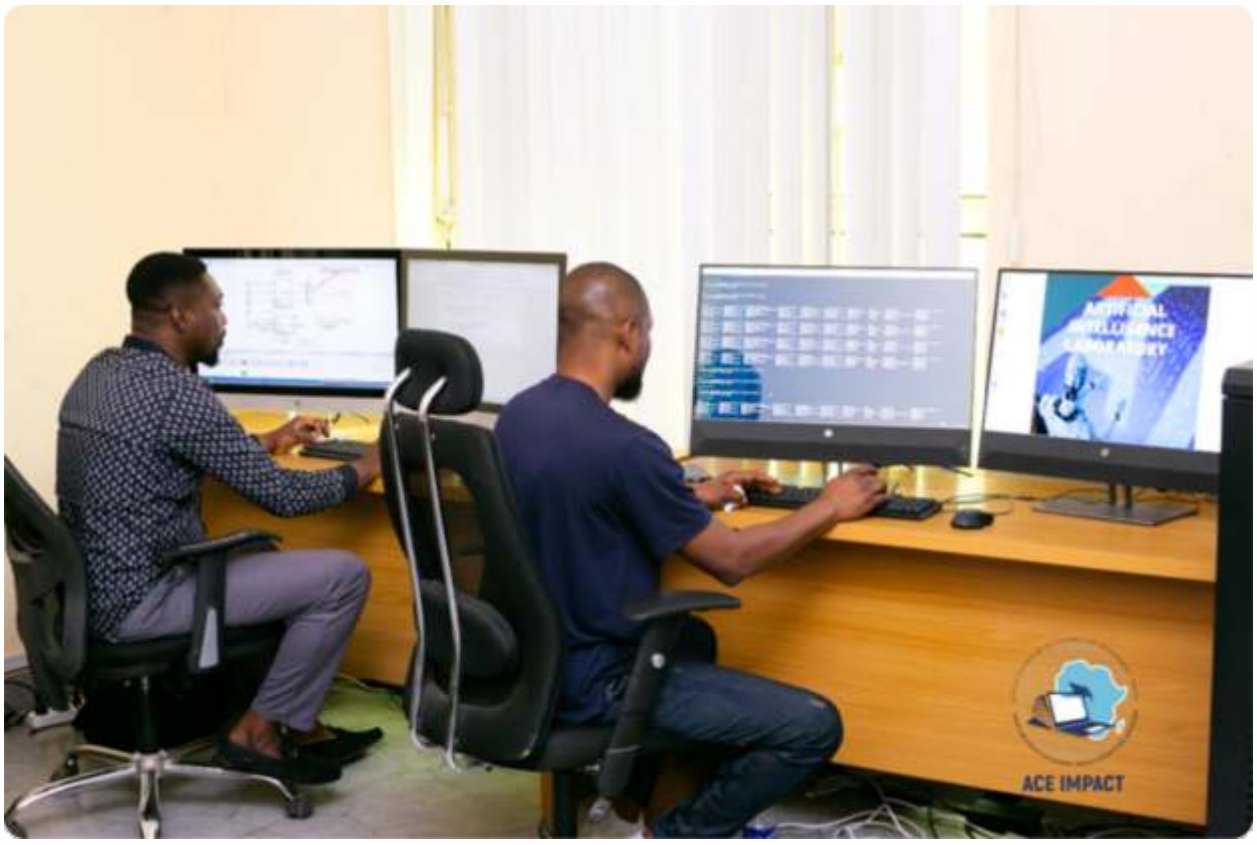

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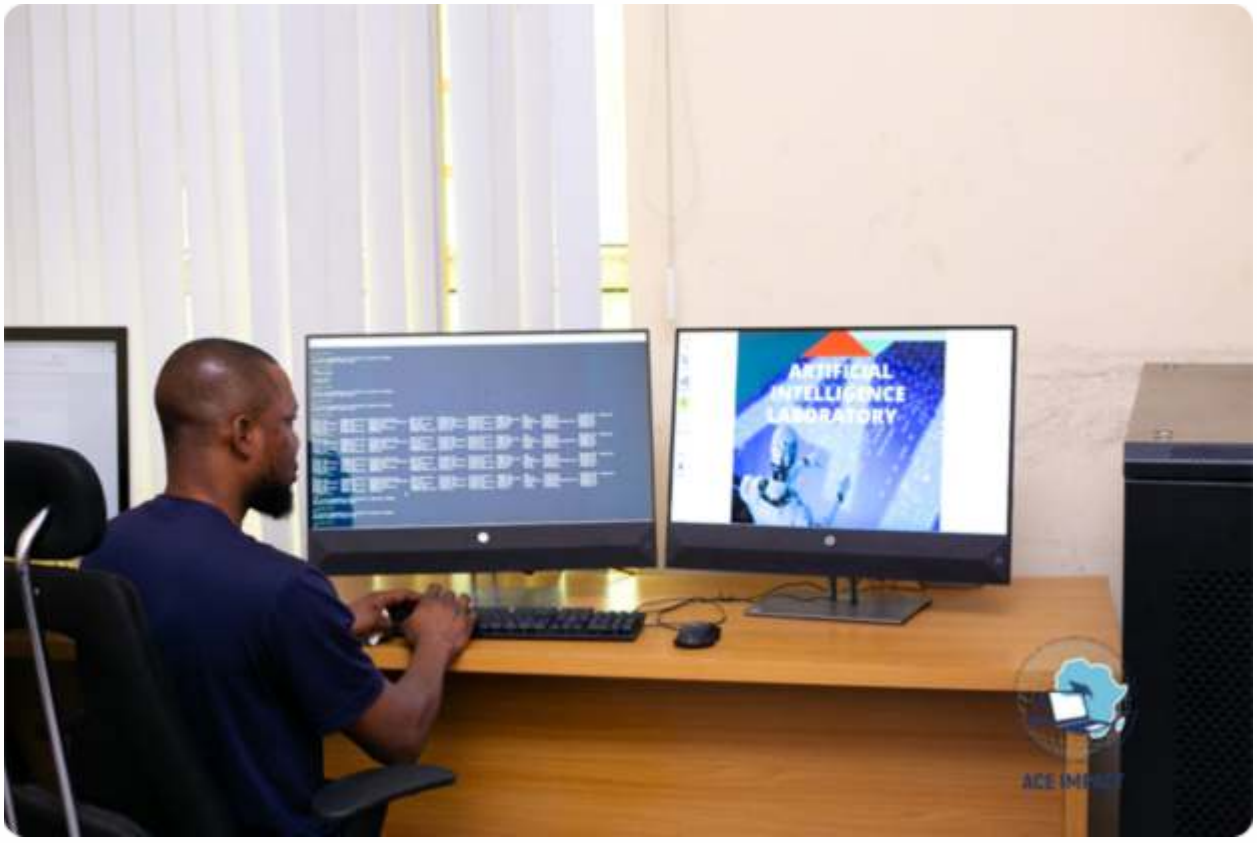



ARTIFICIAL
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LABORATORY


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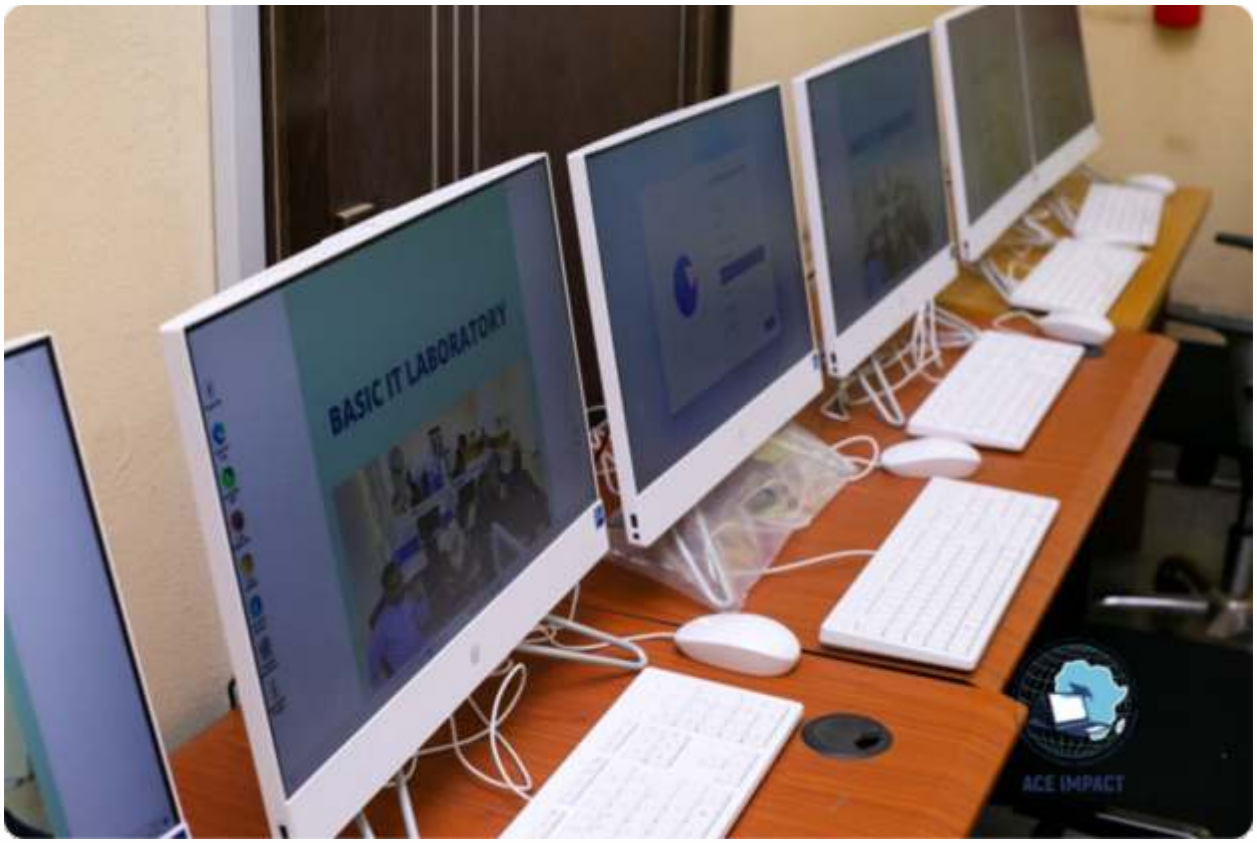



ACE IMPACT


ARTIFICIAL
INTELLIGENCE
LABORATORY


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MANAGEMENT
INFORMATION SYSTEM
LABORATORY
ACE IMPACT

LAGOS STATE UNIVERSITY

CENTRE OF EXCELLENCE FOR INNOVATIVE AND TRANSFORMATION STEM EDUCATION (ACECITSE)

Introduction

The lack of quality teachers remains a barrier to African countries' ability to sustain education systems that can adequately address their national development challenges. The challenge is especially severe in the areas of Science, Technology, Engineering and Mathematics (STEM). Such a situation will likely impede the attainment of the African Union's Agenda 2063, which highlights STEM education and innovation as essential for reaching its set goals, as they are crucial for Africa's competitive standing. Nigeria, with its large population that needs transformation to become more productive, also faces challenges in the drive for quality teachers for STEM.

Objectives

The Centre of Excellence for Innovative and Transformative STEM Education (ACEITSE) was established to address teacher quality challenges in Nigeria and the wider Sub-Saharan Africa. Key focus areas are the Science, Technology, Engineering, and Mathematics (STEM) education fields. The transformation of the Nigerian education system toward greater excellence depends on the availability of qualified STEM teachers with the skills and competencies to effectively communicate the curriculum, thereby inspiring participants in the education system to achieve more and enhance global mobility.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	20	10	10	3	25	13	10	2
Enrolment in Master's Programmes	40	35	15	5	41	37	19	4
Enrolment in Short Courses	70	40	80	75	30	88	83	74
Internships	110	50	15	25	116	50	16	29

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	**0**	**0**
Partnerships	**3**	**2**
Accreditations	**4**	
No. of Publications (journals, etc.)	51	

REVENUE ($)	Target	Actual
	454,660	**113179**

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	6,015,558	5,663,728	5,214,844	91

DLI PERFORMANCE (%)

DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		2		100	99	100		100	60	100	37	100	100	100	100	100		100		100	100		100

The Centre has been consistent in developing and implementing STEM and Education programmes. Collaboration and partnerships included training of STEM teachers in Ghana, Benin Republic and, of course, Nigeria. The advanced research facilities available for students as well as mentorship programmes provided transformative approaches to the education of STEM teachers. Of particular note is the high number of women that participated in the programmes. Of the 426 doctoral and master's degree students, 218 (more than 50%) are women. Several innovative approaches were also introduced to enhance students' experiences. These include TEA Learn, an online learning and management system, and the Culturo-Techno Contextual Approach (CTCA) in teaching and research, which has been popularised nationally. Local, national, and regional collaborations established and are still creating opportunities for sustainability in the institution as well as professional development opportunities for students and alumni.

GALLERY OF FACILITIES AND ACTIVITIES



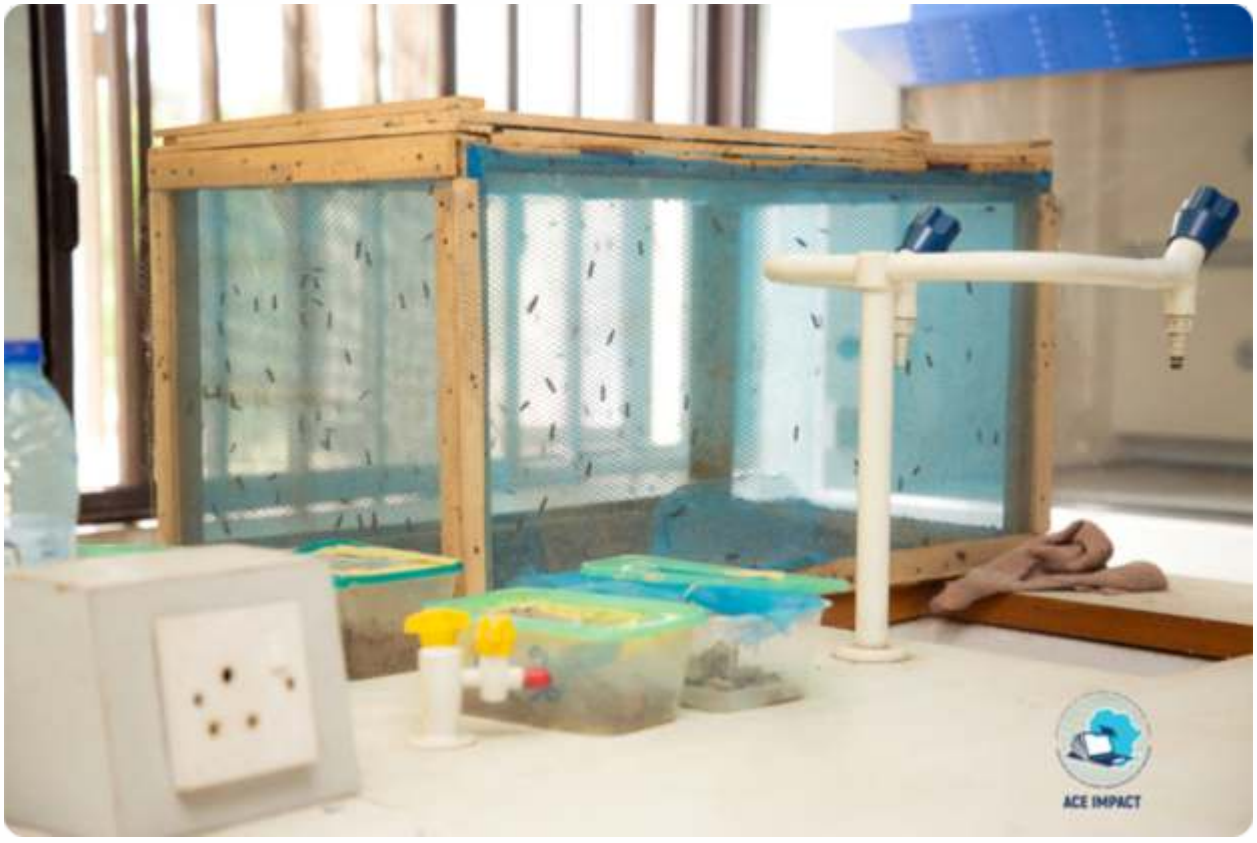



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LASU-ACEITSE
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city




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SOUNDGARDEN
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LASU/AC/ZEE
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BIOBASE TETFUND ZONAL INTERVENTION 2021
TETFUND ZONAL INTERVENTION 2021


BIOBASE TETFUND ZONAL
INTERVENTION 2021
ACE IMPACT


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INTERVENTION 2021


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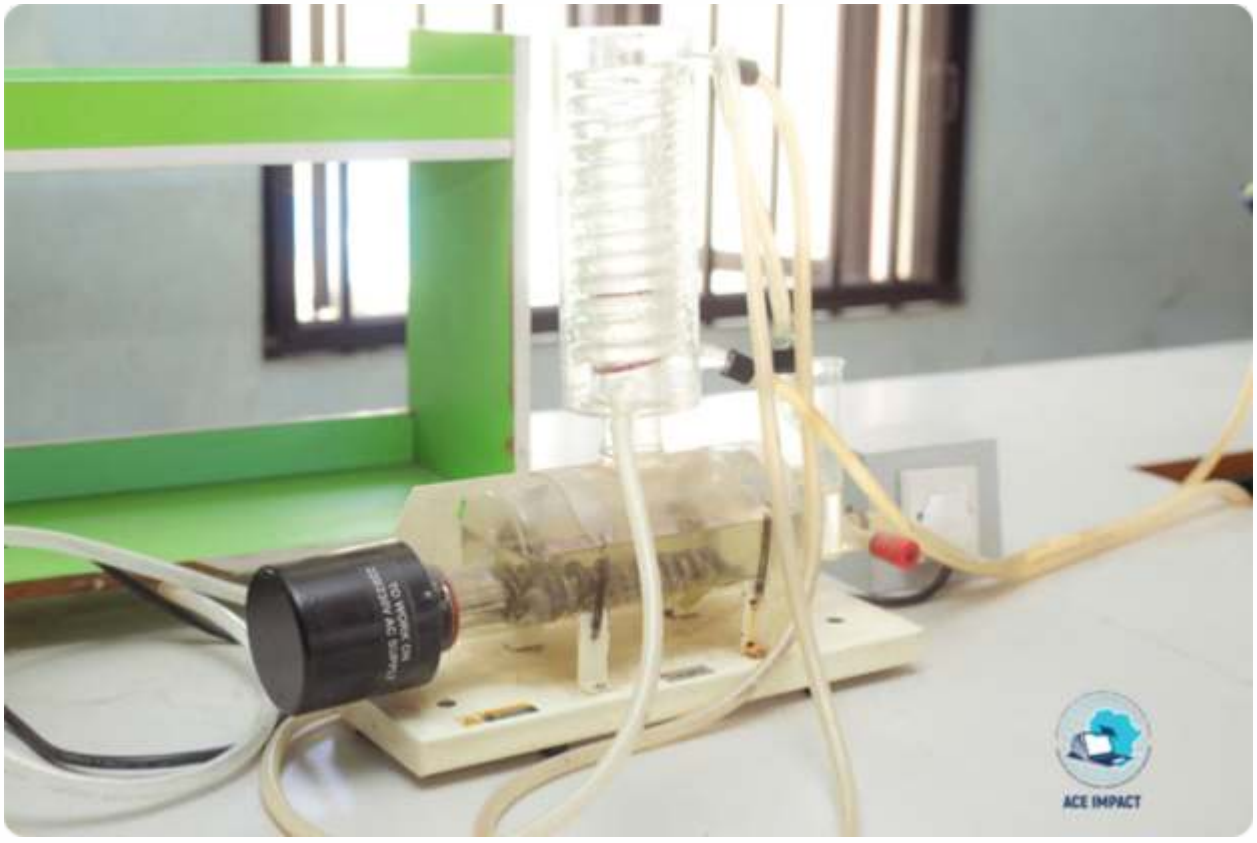

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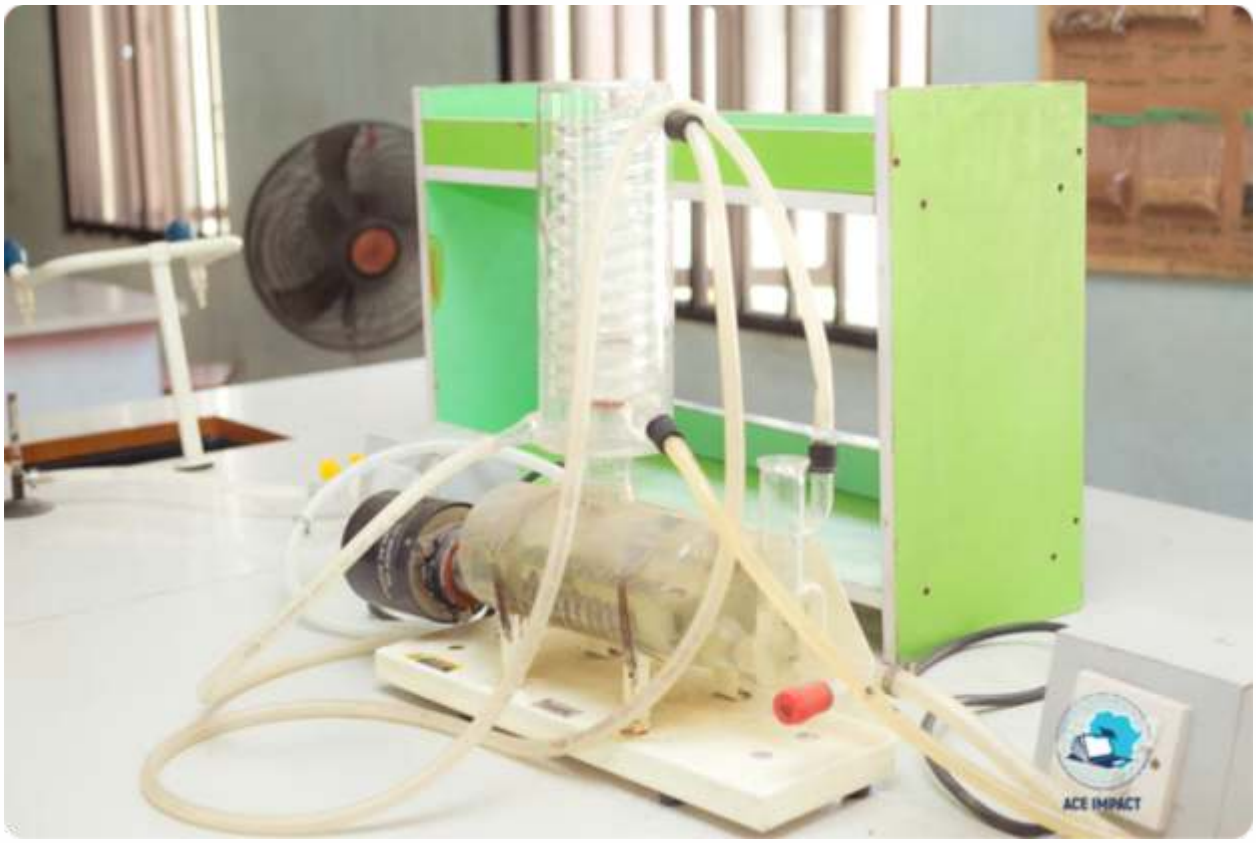

ACE IMPACT


ELECTRONIC BALANCE
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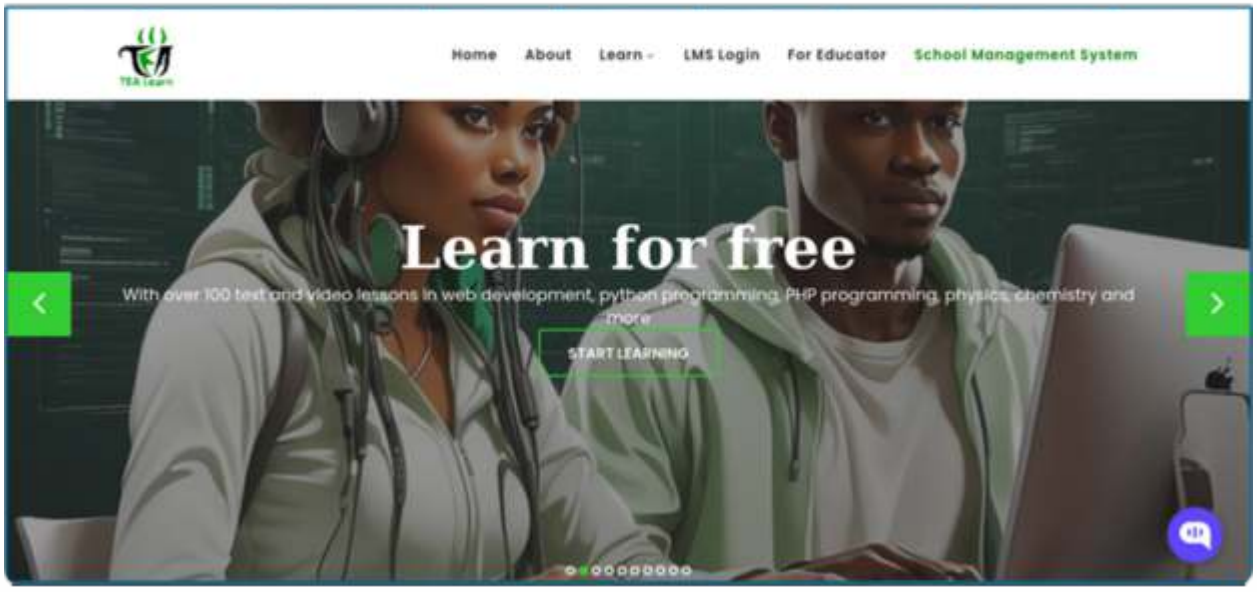

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FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

CENTER OF EXCELLENCE FOR MYCOTOXIN AND FOOD SAFE (ACEMFS)

Introduction

Part of the factors contributing to the loss of agricultural products in Nigeria are mycotoxins. Increased food production expected from agricultural initiatives are hindered by food-borne diseases, which also threaten food security. These issues additionally cause decreased performance of animal husbandry and have direct human health impacts, including higher rates of cancers, growth stunting in children, reduced life expectancy, and death. There are also several other threats that need urgent attention.

Objectives

Centre of Excellence for Mycotoxin and Food Safety (ACEMFS) was established to create learning opportunities and generate research results that address Africa's shortage of expertise and practical solutions. Its goal is to ensure safe, controlled, and sufficient food supply to support economic growth and public health. The focus is on an interdisciplinary, hands-on education and research approach that prepares future leaders to meet the growing need for innovations at the nexus of food security, food safety, agricultural productivity, and economics from local to global scales.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	5	4	5	3	10	08	05	01
Enrolment in Master's Programmes	20	20	15	15	45	22	10	02
Enrolment in Short Courses	300	300	300	300	232	574	94	415
Internships	30	25	15	10	55	30	15	03

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	**3**	**NIL**
Partnerships	**27**	**20**
Accreditations	**6**	**4**
No. of Publications (journals, etc.)	90	

REVENUE ($)	Target	Actual
	500,000.00	**477,119.32**

PROJECT COSTS ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	$6,000,000	$6,709,622	6,304,576	94%

DLI PERFORMANCE (%)

DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		100		100	100	100		100	100	100	100	100	100	100	100	100	100			100			100

The Centre established laboratory facilities to support its education and research objectives. Master's and PhD programmes in Food Safety, Toxicology, Molecular Biology and Bioinformatics were introduced to address current critical knowledge and skill gaps needed to train a skilled and innovative work force. It developed an early warning mobile app system for the detection of mycotoxins. This has been demonstrated with further input being made for wider deployment. Other developments with key impacts include:

1. Development of phytofungicides that will bio-competitively eliminate mycotoxin-producing fungi on the farm;
2. Development of nano-based mycotoxin feed binders and detoxifiers, and portable detection systems;
3. Production of eco-friendly and bio-degradable nano-silica pest and fungal repellent food pouches for storing maize and cowpea; and
4. Genomic surveillance of fungi, mycotoxin analysis, and risk assessment of crops across Central and West Africa.

GALLERY OF FACILITIES AND ACTIVITIES






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Warning
Dangerous
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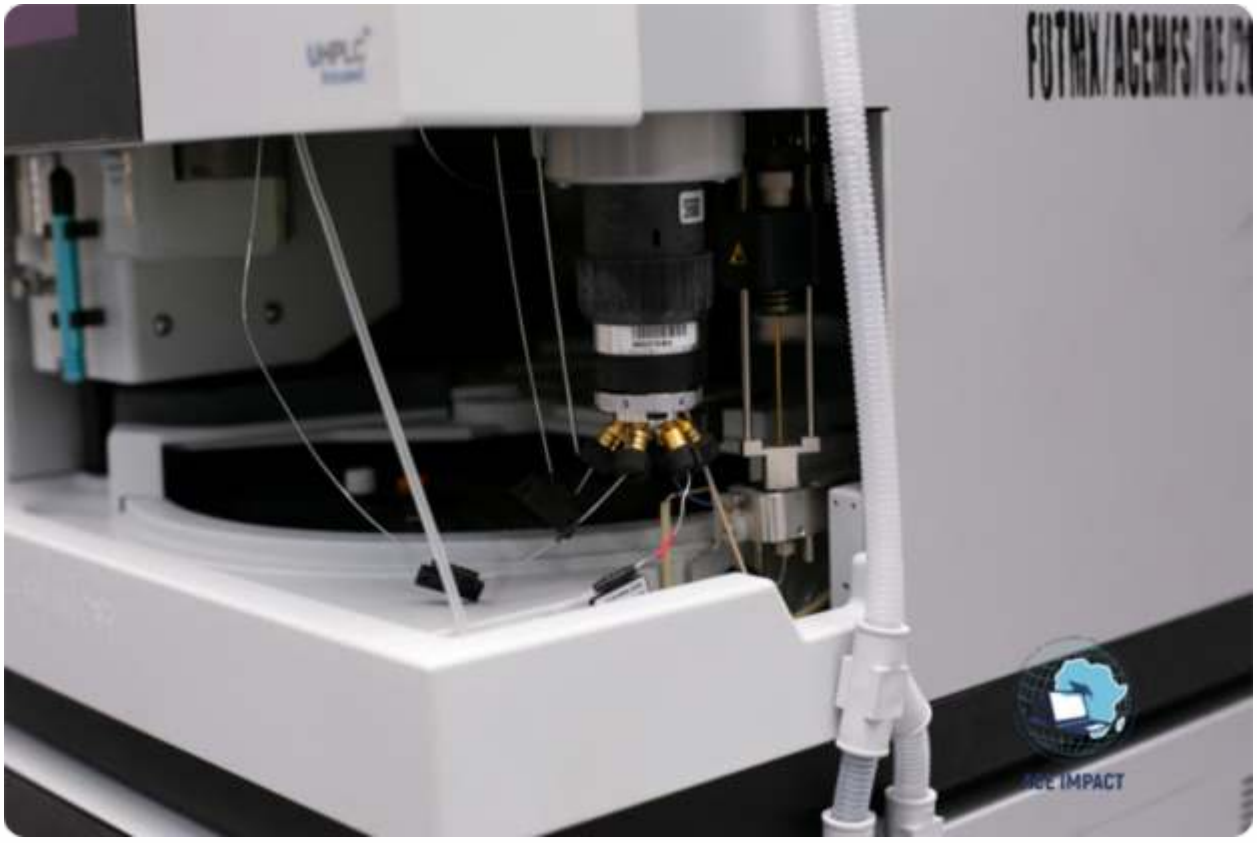

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UNIVERSITY OF LAGOS

AFRICA CENTRE OF EXCELLENCE FOR DRUG RESEARCH, HERBAL MEDICINE DEVELOPMENT, AND REGULATORY SCIENCE (ACEDHARS)

Introduction

Herbal medicine plays a vital role in Nigeria's healthcare system. It is deeply rooted in the culture of the people, easily accessible, and believed to be effective. Over the years, a variety of plants and herbs have been used to address health and wellness issues, either through local knowledge or under the guidance of herbal medical practitioners. A significant challenge has been the lack of regulation in the sector, including preparation methods, dosage and other applications.

Objectives

The aim of the Centre is to develop and implement programmes that align with Nigeria's long-term strategic goal of strengthening the pharmaceutical sector, increasing local drug production, and regulating herbal medicine. The significance of this is even greater because, due to the country's economic conditions, many people who previously relied on modern medicine are turning to herbal remedies. The Centre, therefore, aims to promote academic programmes and research, foster collaboration between academia and industry, and improve infrastructure and practices that will positively impact public health, well-being, and economic growth through herbal medicine.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	15	15	7	5	10	10	2	1
Enrolment in Master's Programmes	30	35	20	10	60	47	32	12
Enrolment in Short Courses	40	50	30	30	185	103	161	103
Internships	50	40	50	20	5	5	15	4

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	50	25
Partnerships	8	4
Accreditations	9	2
No. of Publications (journals, etc.)	75	

	Target	Actual
REVENUE ($)	846,240	633,218

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	6,000,000		**5,744,173**	**88**

DLI PERFORMANCE (%)

DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		87	68	100	100		100	100	100	75	25	100	100	100	100		100		100		100	100	

A start-up company, ACE-LAG Ltd., relating to work at the Centre, was registered to promote the results of its activities. Laboratory infrastructure was upgraded in the areas of drug research and herbal medicine regulation, including herbal production units, analytical laboratories, and herbal products commercial store. Specialist programmes were designed and accreditation processes completed. Engagement with stakeholders led to alignment with national policy and project implementation. This also increased public and private sector participation in research and investment in the field. Strong regional networks and partnerships were established and strengthened through workshops, forums, and supervision missions. These initiatives promoted the sharing of ideas, which extensively benefits the Centre and its work.

GALLERY OF FACILITIES AND ACTIVITIES

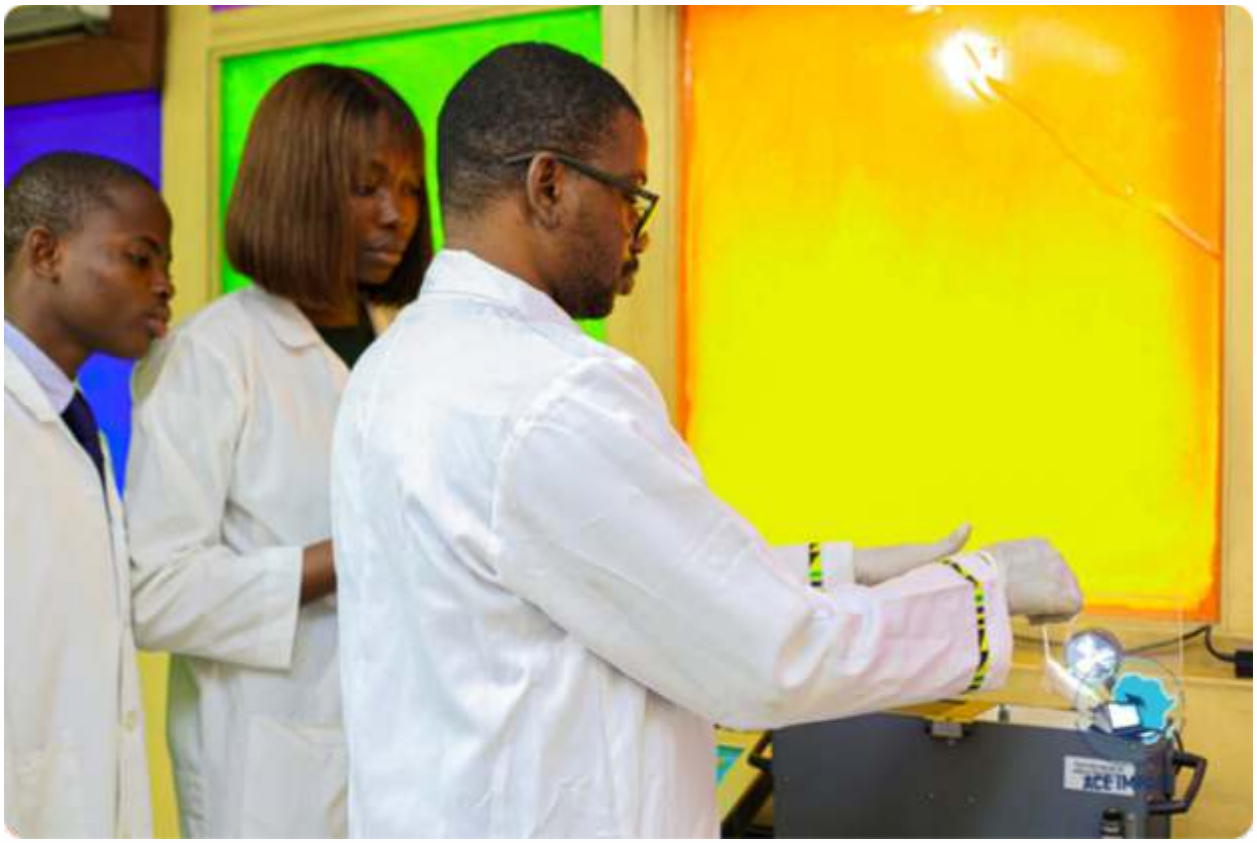





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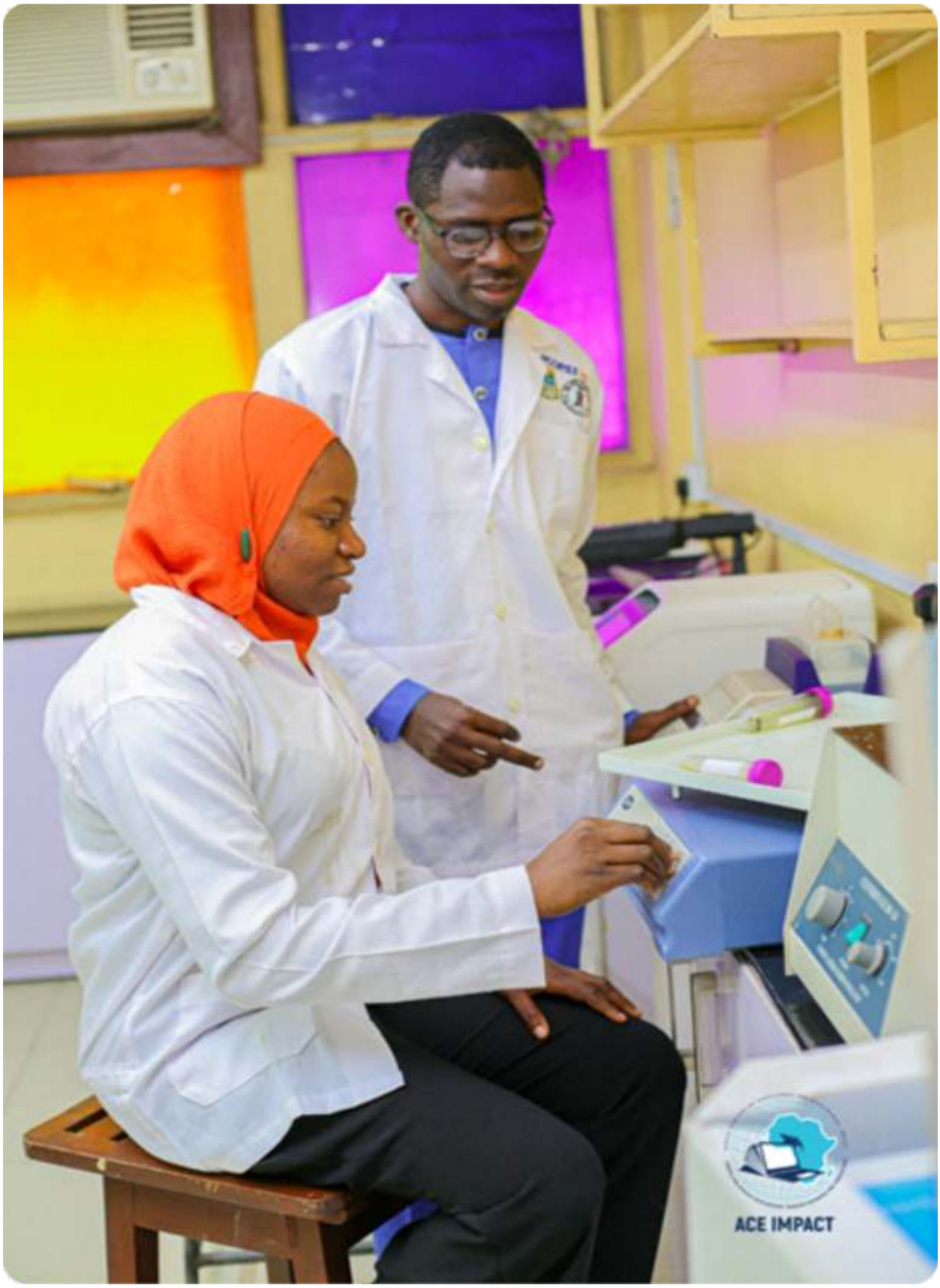

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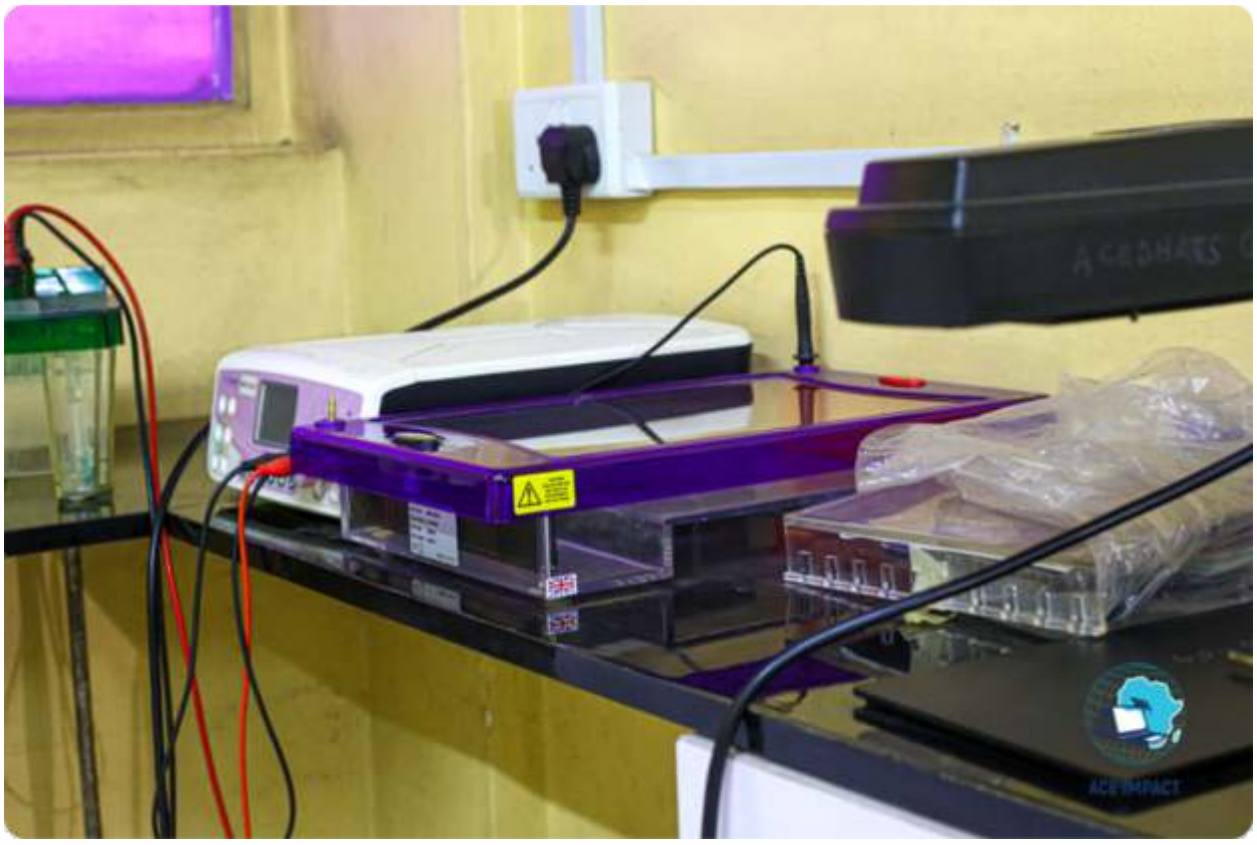

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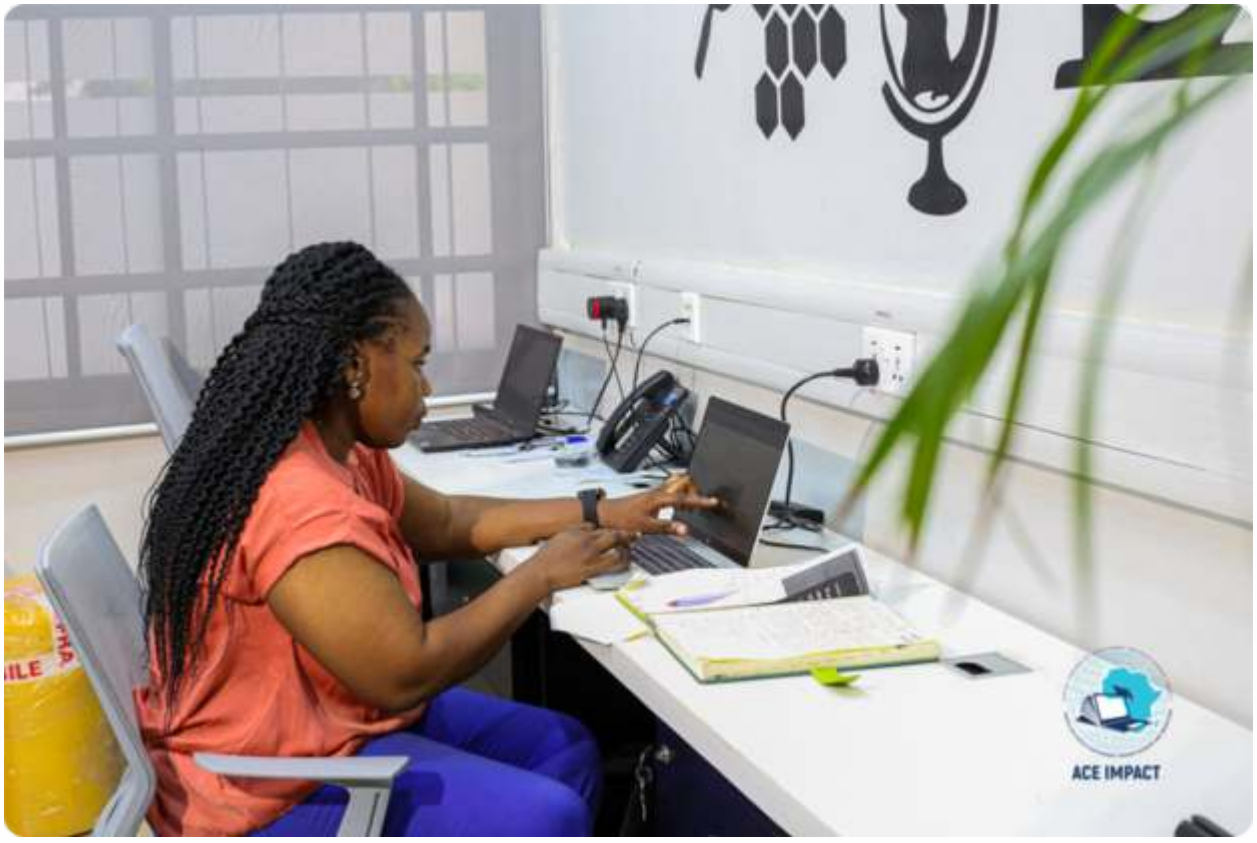

Reservoir


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LXG
SPF 30
30ml
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REST
AFRICAN BLACK SOAP
Calmative and Soothing Cream Soap
For a good sleep after a good bath
NAFDAC REG. NO:
Organic
All botanicals, no artificial or preservative added
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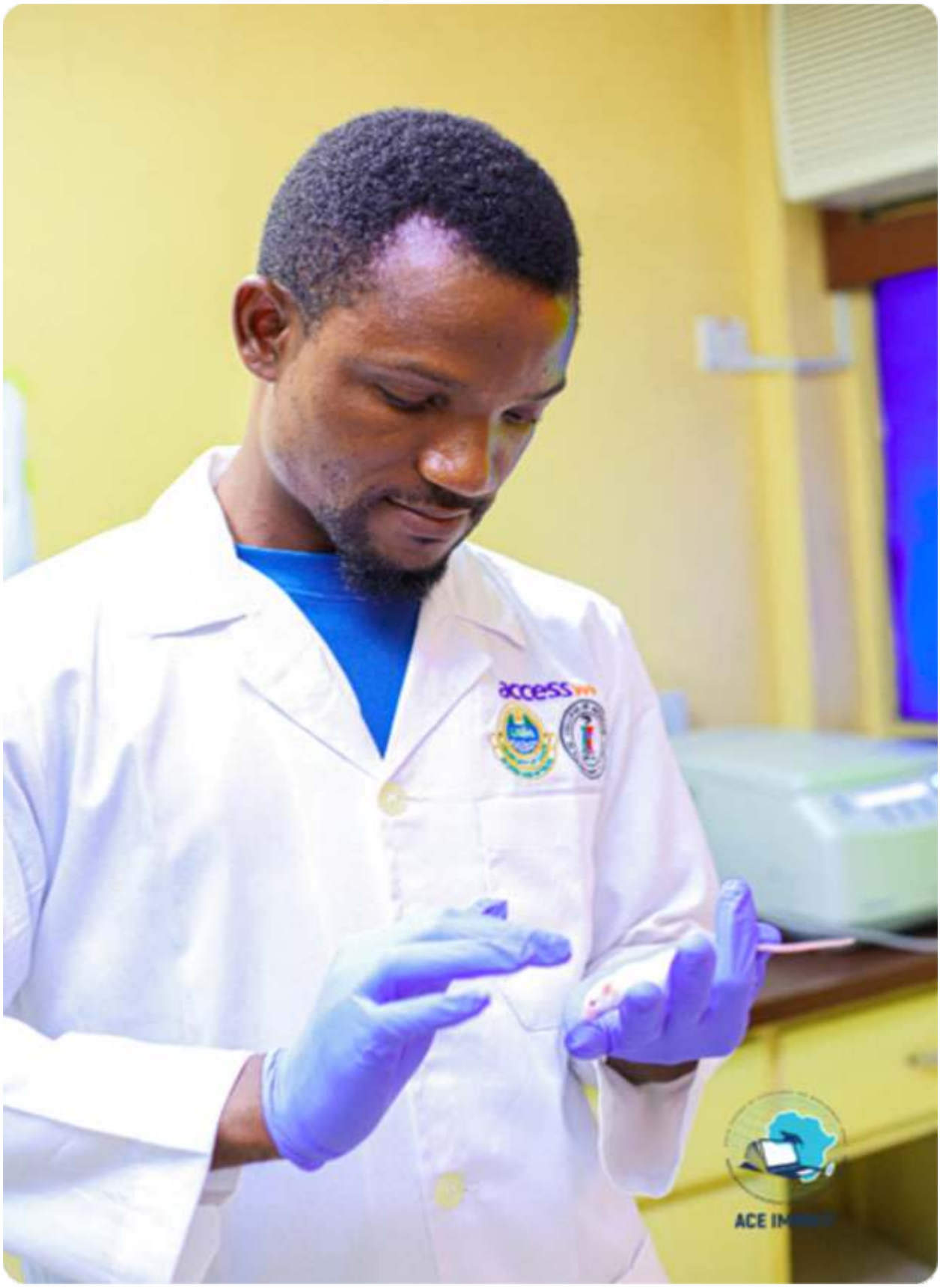

LXG
ACE-LAG
BLOOD PRESSURE
AND
HEART SUPPORT
30 Capsules
LXG
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BLOOD PRESSURE
AND
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LXG
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BLOOD PRESSURE
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LAG
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Stress and Mood Support Tea
Vegan Stress Relief Supplement
Calmnative for the mind and body
Net weight: 40g
20
Tea Bags
ACE IMPACT


LAG
ACE-LAG
Respiratory Health and
Immune Support Herbal Tea
Vegan Immunity Boosting Tea
Helps cleanse and detox the lungs
Net weight: 20g
10
Tea Bags
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AHMADU BELLO UNIVERSITY

CENTRE OF EXCELLENCE FOR NEW PEDAGOGIES IN ENGINEERING EDUCATION (ACENPEE)

Introduction

Every society relies on various fields of engineering to provide solutions for complex challenges and improve quality of life. The design, construction and maintenance of infrastructure for different functions are essential to societal dynamism. Engineers play a central role in this, and ensuring the availability of skilled manpower in these fields is crucial. Education programmes that are relevant to the engineering needs of society are, therefore, top priority. Nigeria and several other parts of Sub-Saharan Africa need skilled professionals to achieve national development goals and maintain a competitive edge.

Objectives

The Centre of Excellence for New Pedagogies in Engineering Education (ACENPEE) focuses on strengthening higher education training and applied research programmes. Its goal is to create impact through activities that support overall institutional growth in research commercialisation and entrepreneurship.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	70	10	5	2	74	6	3	0
Enrolment in Master's Programmes	180	30	35	5	200	22	36	1
Enrolment in Short Courses	80	40	30	5	81	51	35	7
Internships	170	20	20	5	174	16	28	0

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	2	-
Partnerships	52	4
Accreditations	8	4
No. of Publications (journals, etc.)	52	

REVENUE ($)	Target	Actual
	684,414.00	273,029

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	6,000,000	5,800,000	4,529,539.59	78.1 %

DLI PERFORMANCE (%)

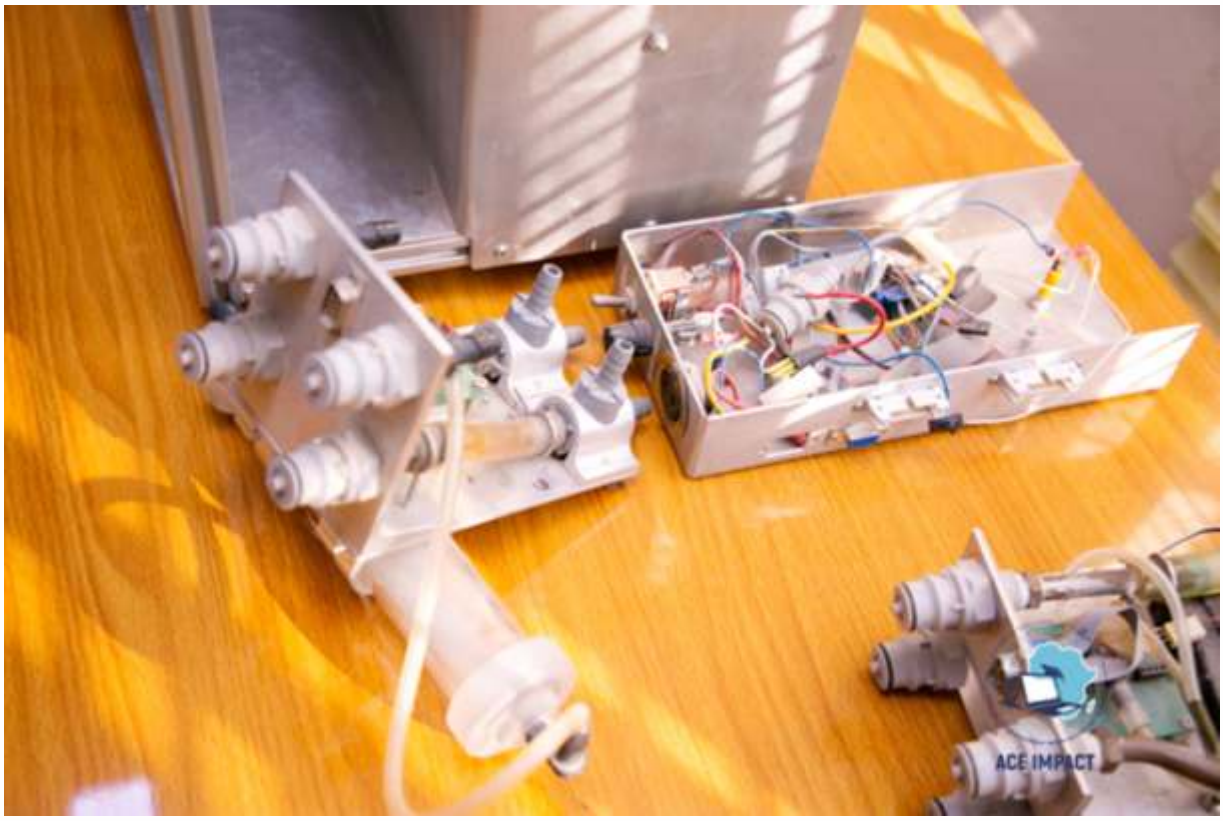
DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
100		100		100	100	100		100	40	100	37	100	100	100	100	100	100			100		100	100

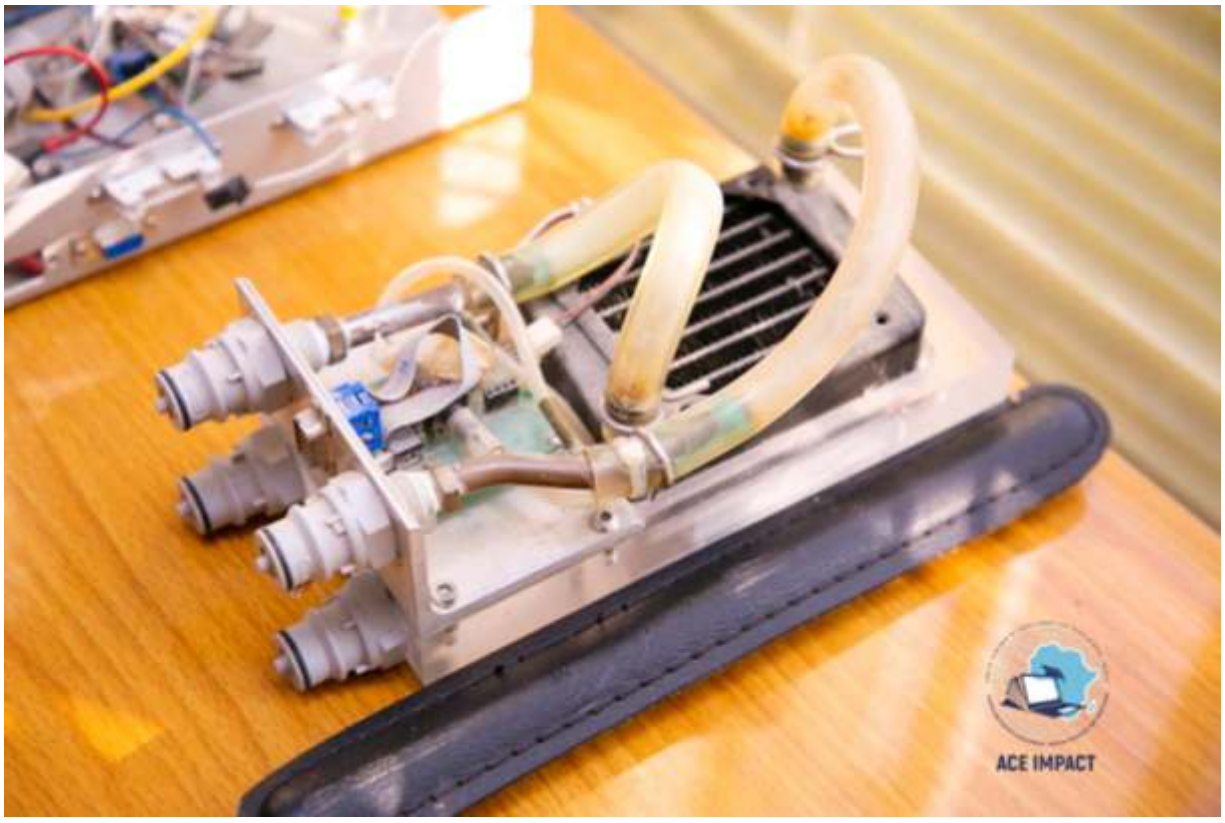
Among other innovations, ACENPEE developed a new pedagogy during the project: Communicate, Active, Collaborate, Problem-based Solving, Learning, and Assessment (CACPLA). CACPLA was derived from the cooperative, hands-on, active, problem-based learning (CHAPL), and the discover, learn, practice, collaborate, and assess (DLPCA) pedagogies. These pedagogies (CHAPL and DLPCA) are five-component blended learning methods that combine asynchronous and synchronous teaching methods. The CACPLA concept builds on CHAPL and DLPCA to create a new pedagogy that aligns with the Institution's academic settings. This approach was adopted to demonstrate that an online teaching strategy can facilitate a gradual shift from physical classrooms to fully online instruction for certain engineering subjects. This method has been tested as an exercise for a module and was used to teach Years 3 and 5 students in the Dynamics of Machinery course (MEEN 307) and Production Management (MEEN 502), respectively.






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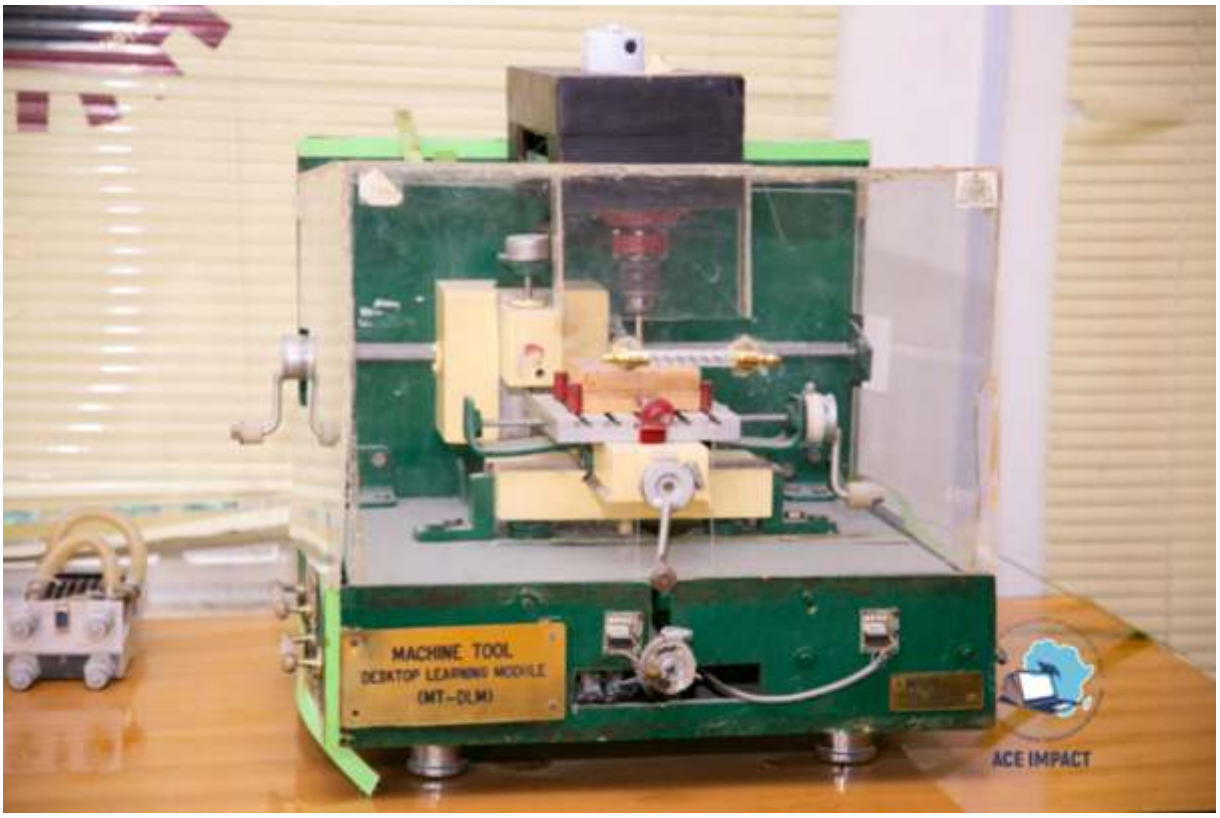

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WASHINGTON STATE
UNIVERSITY
Chemical Engineering

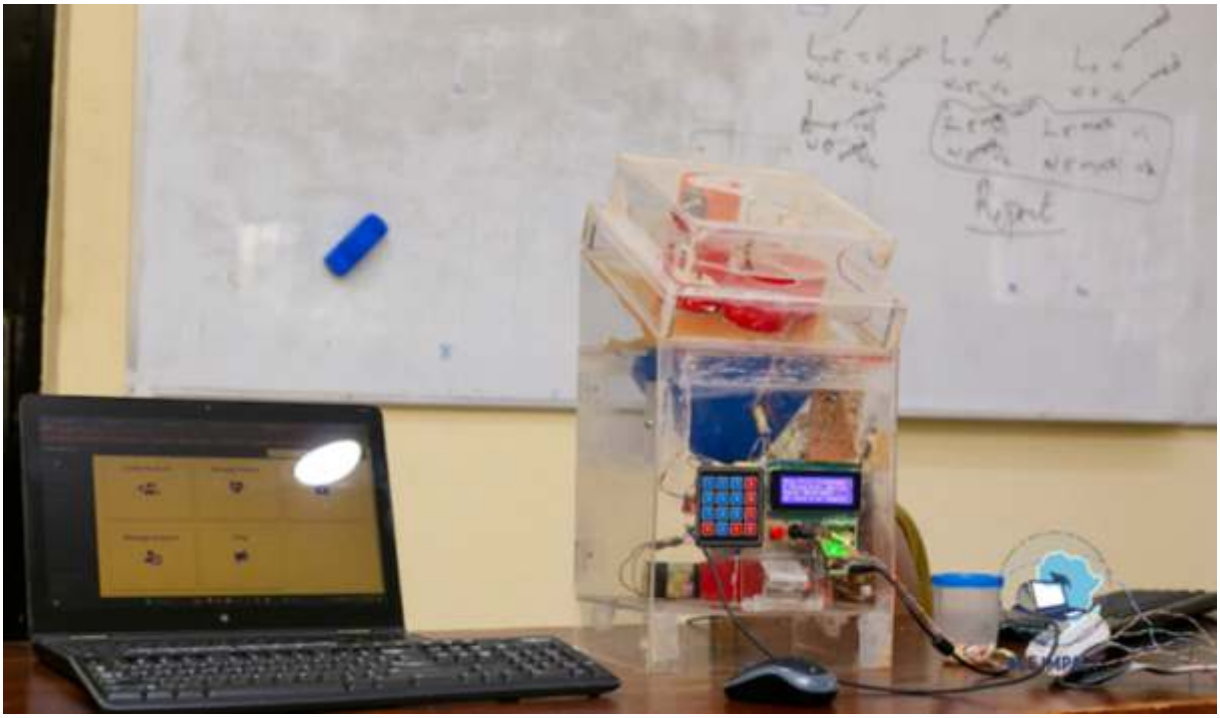

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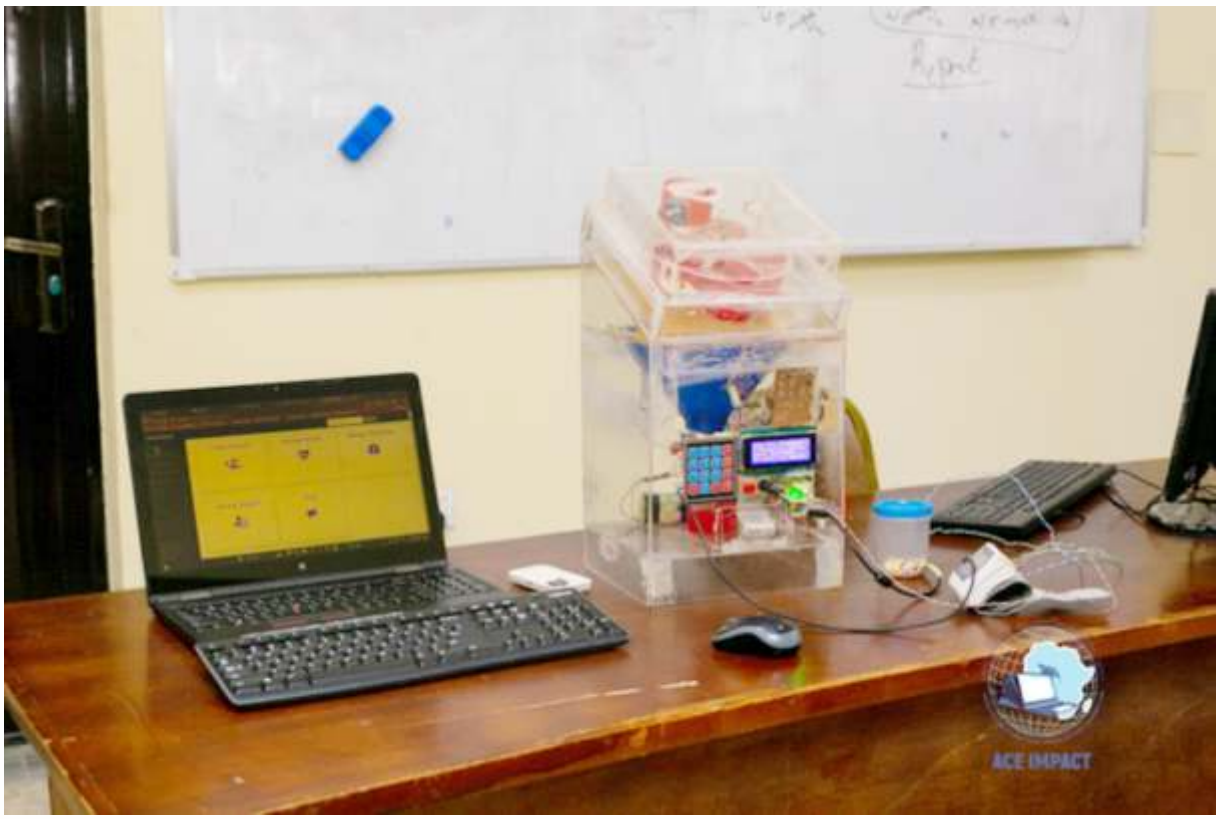

ACENPEE
MACHINE TOOL


MACHINE TOOL
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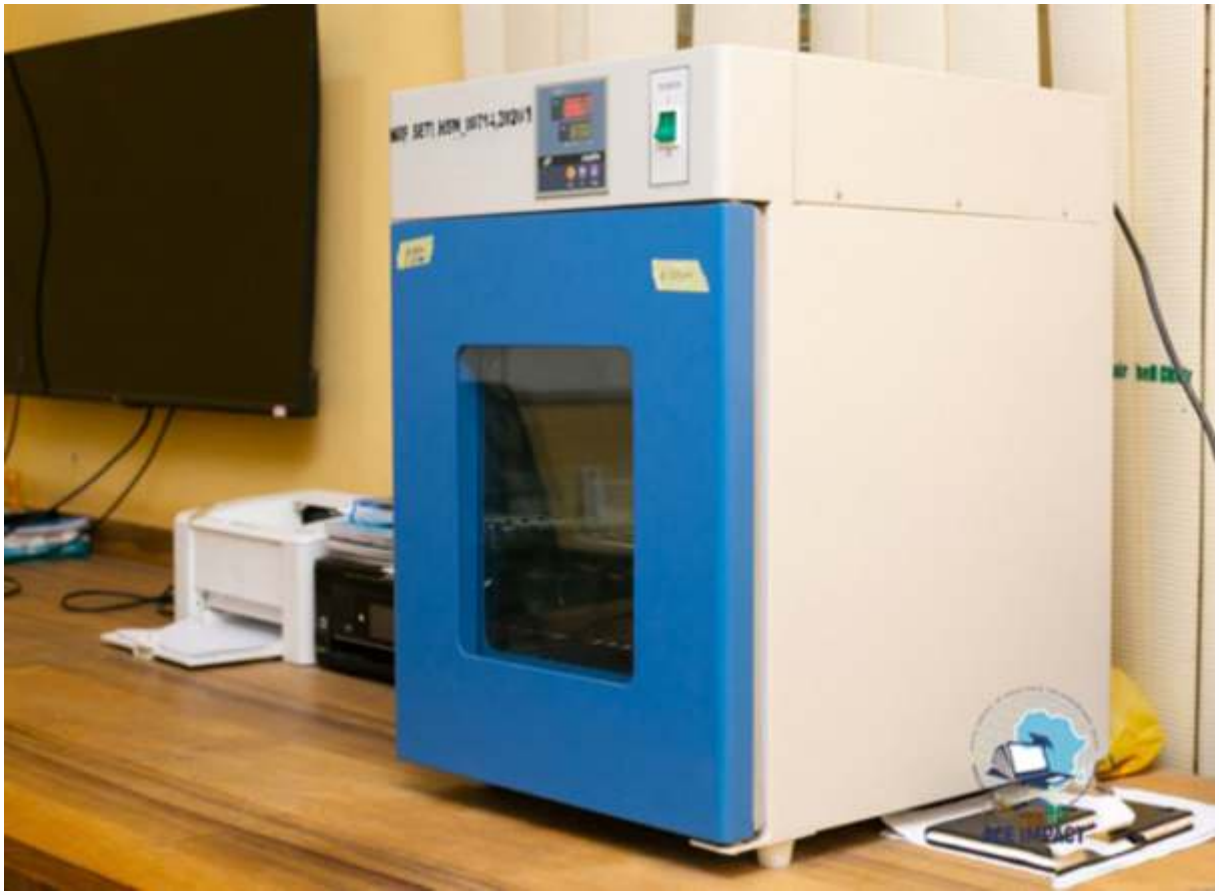



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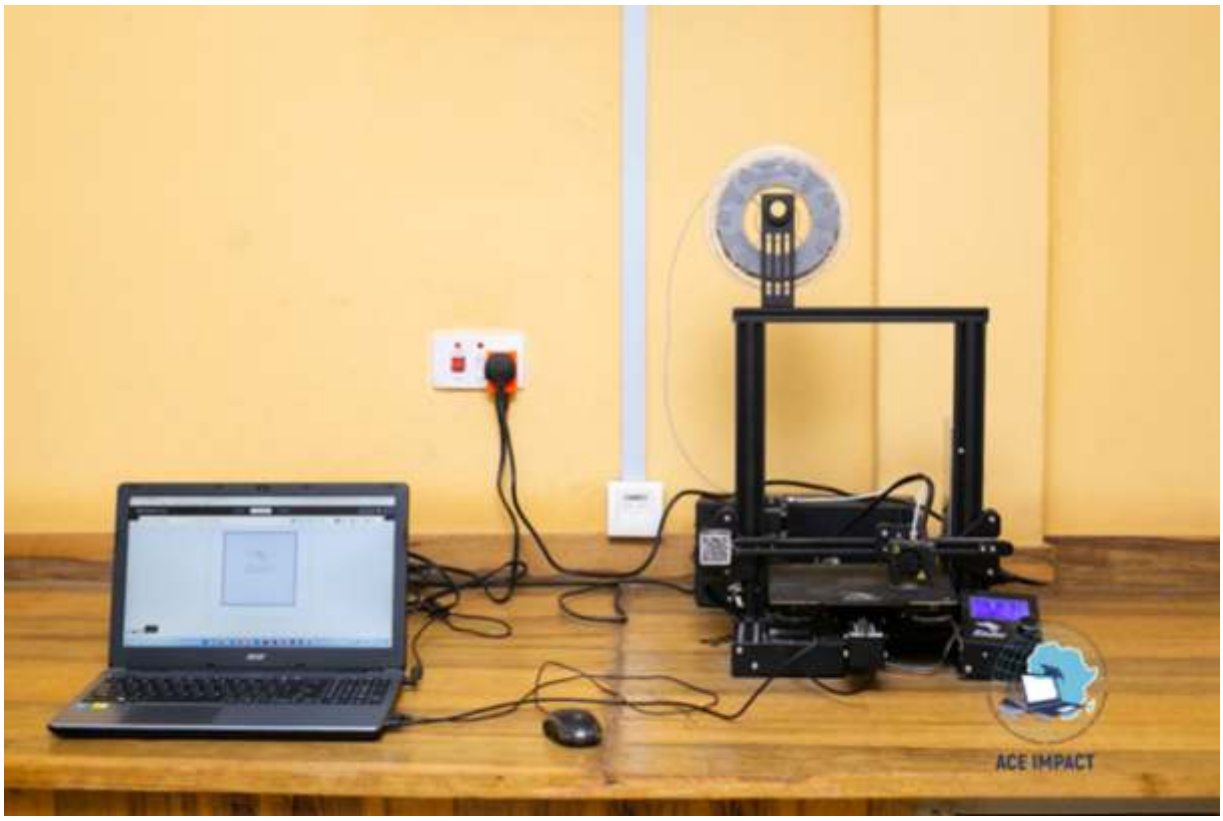



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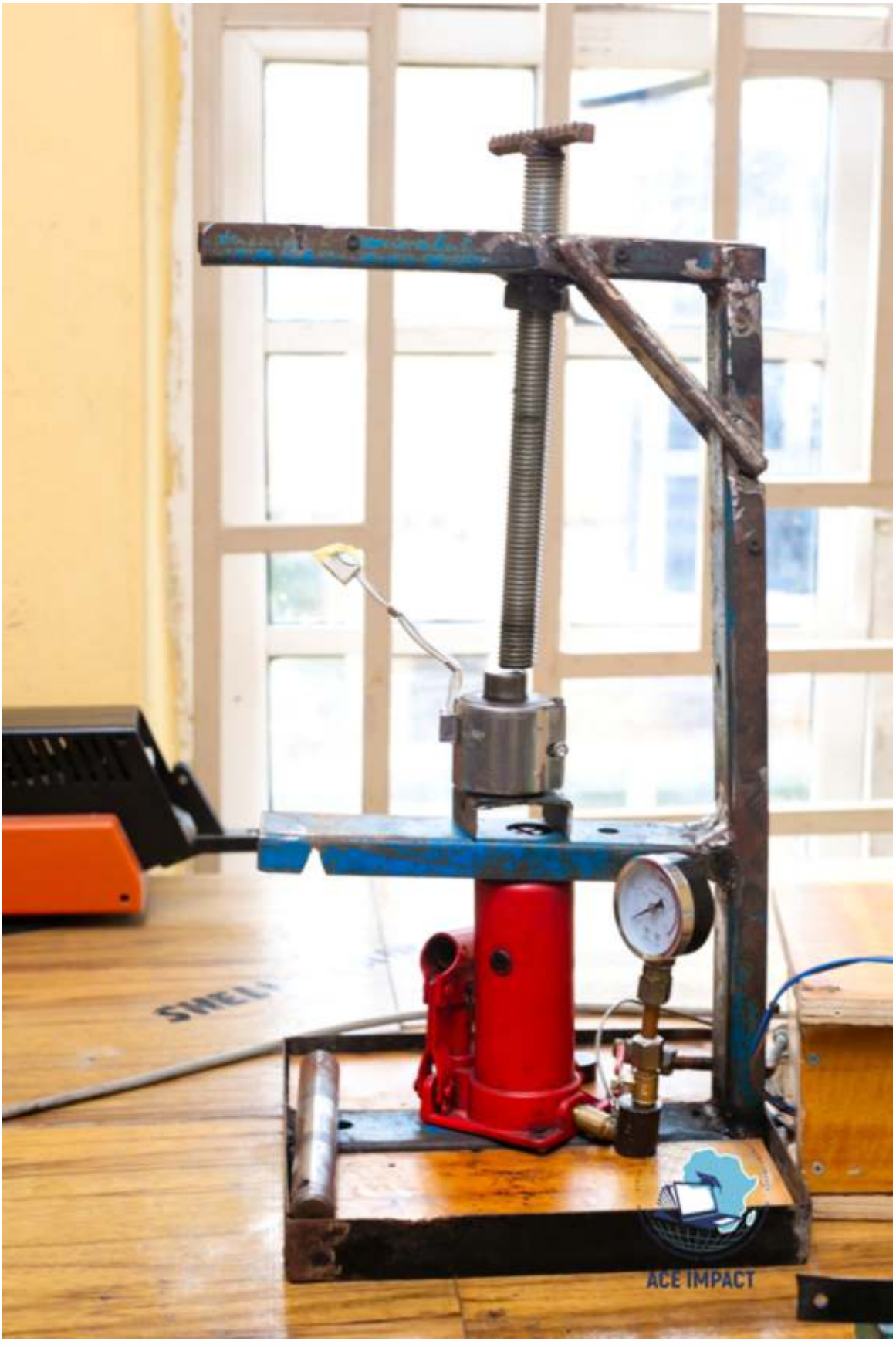

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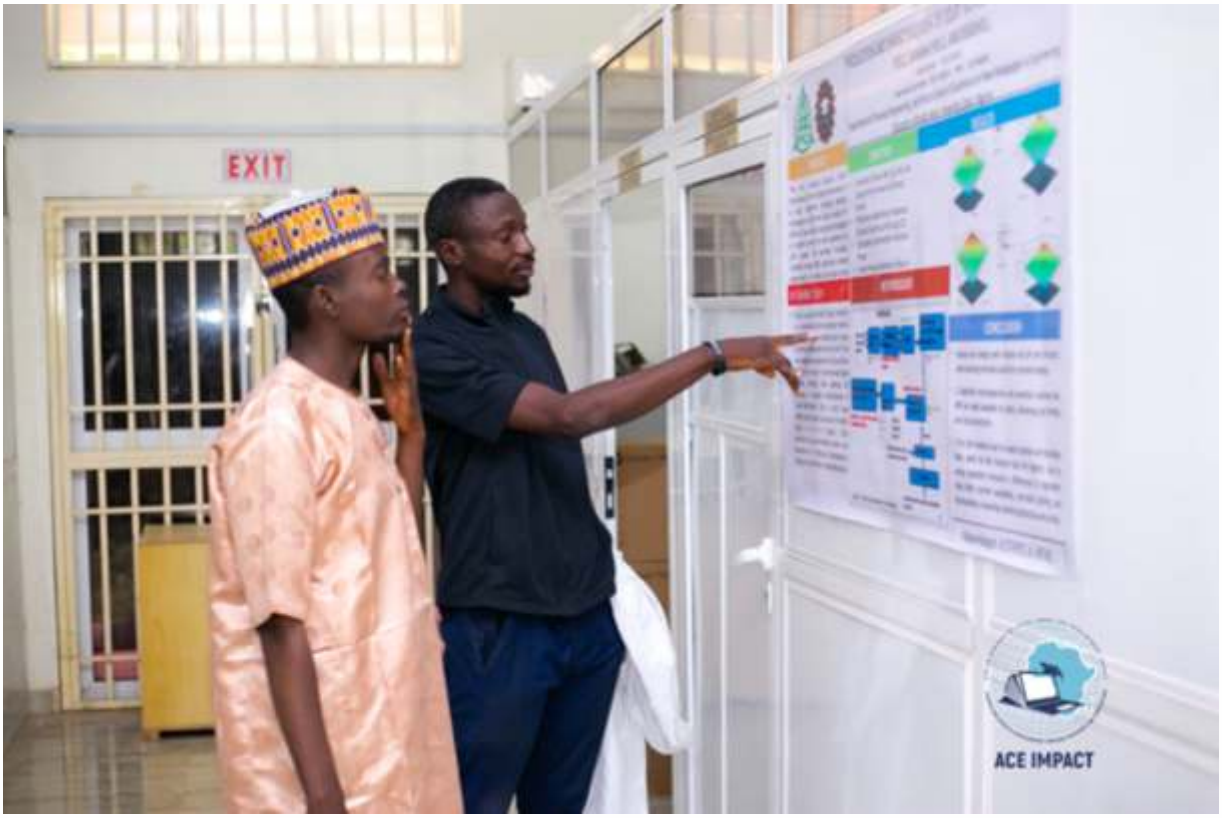

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UNIVERSITY OF NIGERIA, NSUKKA

CENTRE OF EXCELLENCE FOR SUSTAINABLE POWER AND ENERGY DEVELOPMENT (ACE-SPED)

Introduction

The development aspirations of Nigeria are linked to the availability of sustainable power and energy systems. It is the key driver to diverse sectors of the economy. Though Nigeria continues to aim towards achieving SDG 7 which focuses on ensuring universal access to affordable, reliable and modern energy services by 2030, the trends in the industry seem to undermine the attainment of this. Factors contributing to this include poor manpower, inadequate investment, outdated infrastructure and operational inefficiencies. Ensuring the attainment of the SDG 7 and net-zero emission by 2060 which Nigeria also aspires requires that alternative approaches must be strengthened to support the country's aspiration for sustainable power and energy systems.

Objectives

The Center of Excellence for Sustainable Power and Energy Development (ACE-SPED) was conceptualized towards addressing the challenges of lack of access to reliable electric power supply, poor diffusion of renewable and alternative energy technologies. It also seeks to address the challenges of shortage of high-skilled manpower to manage the power supply system. A key aim is a collaborative approach to development of alternative energy systems and working closely with key stakeholders in Nigeria, West Africa and the wider Sub-Saharan Africa.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	19	6	7	4	58	8	24	6
Enrolment in Master's Programs	70	20	35	10	116	30	28	10
Enrolment in Short Courses	42	13	16	6	113	18	50	16
Internships					261	47	18	5

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	2	-
Partnerships	34	5
Accreditations	16	2
No. of Publications (journals, etc.)	202	

REVENUE ($)	Target	Actual	
	$302,038.2(	$376,128.91	₦18,965,307.38

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	6,000,000	5,560,412	5,560,412	100

DLI PERFORMANCE (%)

DLI																						
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
100		100		100				100			100			100				100					

The education, training, and research activities of the Centre have led to government and non-government organisations seeking partnerships in the areas of sustainable energy systems to support their priorities. The doctoral and master's programmes of the institution continue to be relied on by institutions and organisations seeking to develop their manpower in these unique fields. The Enugu State Government sought partnership on the use of renewable energy in agriculture. The Centre is also worked in partnership with the National Power Training Institute of Nigeria, a key agency on building human capacity for the power sector in Nigeria. The parent University is ensuring institutional sustainability by integrating the Centre as a statutory unit to ensure the availability of resources from the University.

GALLERY OF FACILITIES AND ACTIVITIES







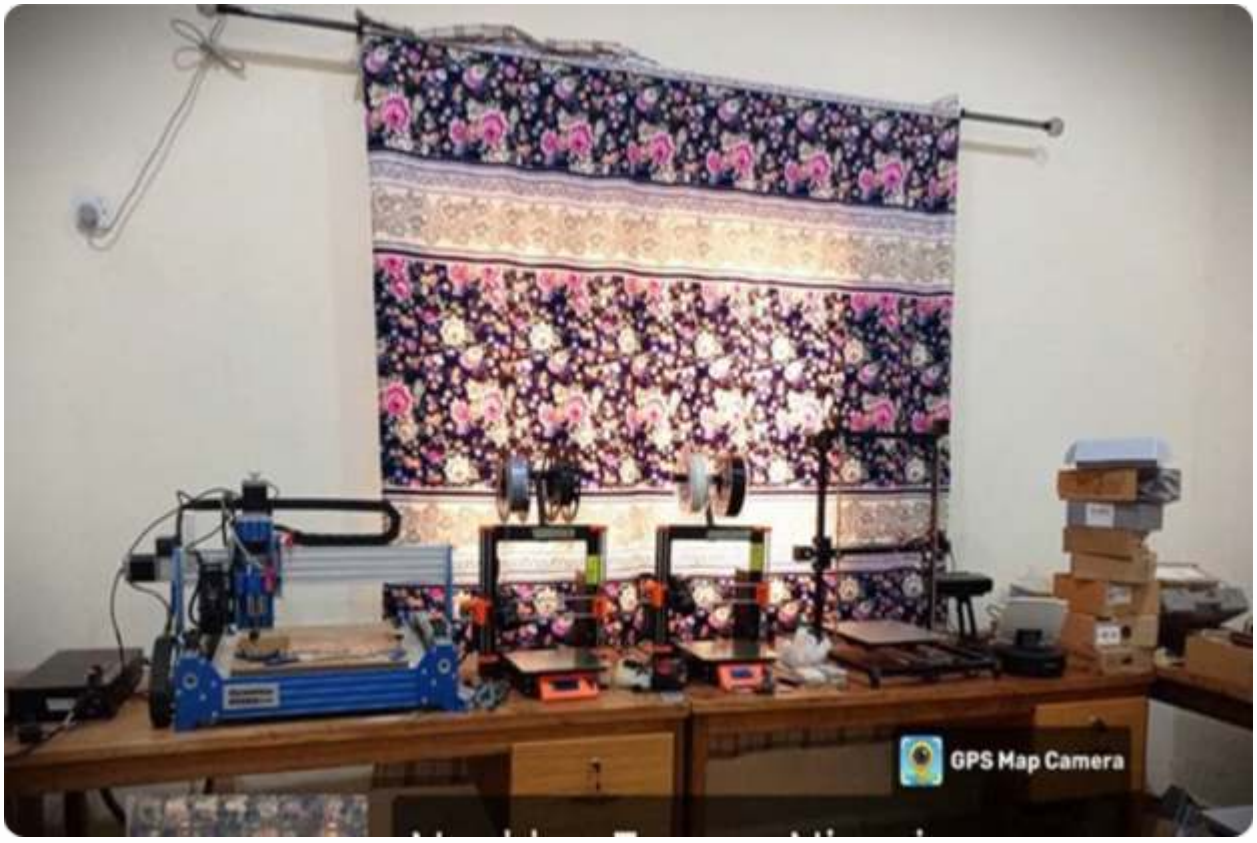








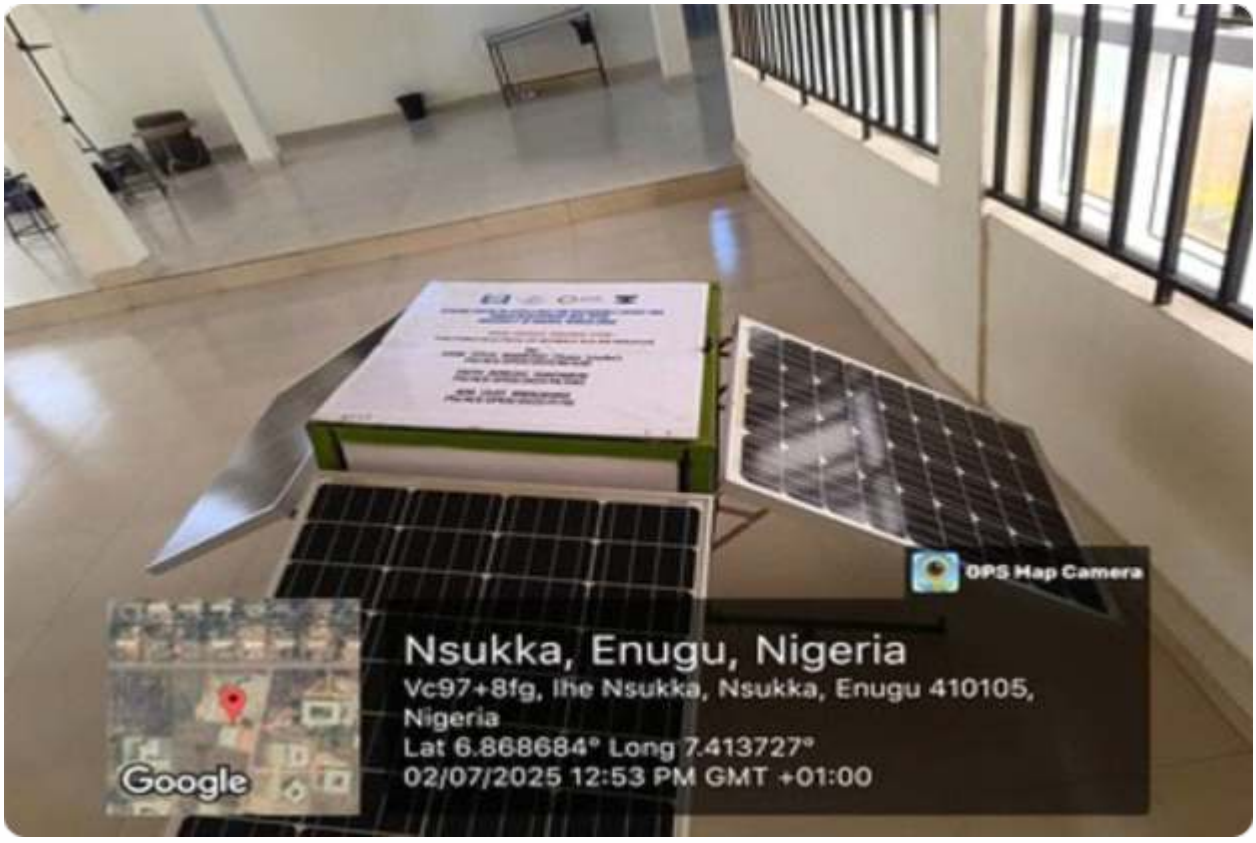

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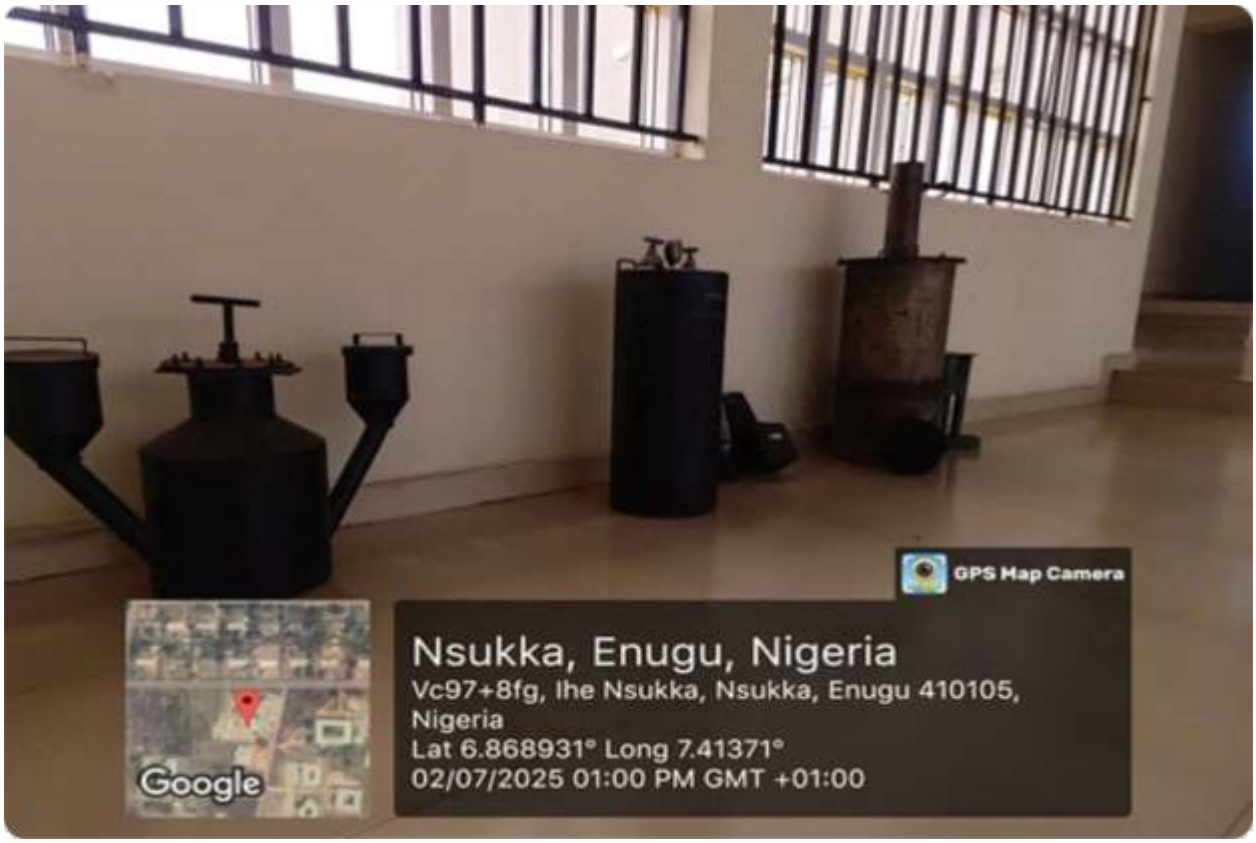

GPS Map Camera








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GPS Map Camera





FEDERAL UNIVESITY OF TECHNOLOGY OWERRI

CENTRE OF EXCELLENCE IN FUTURE ENERGIES AND ELECTROCHEMICAL SYSTEMS (ACE-FUELS)

Introduction

Poor access to energy remains a major obstacle to Nigeria's and the broader sub-region's economic development goals. Additionally, the challenge of skills in the energy sector affects the capacity to explore alternative energy generation using available resources. These issues hinder Nigeria's efforts to achieve clean energy and universal access by 2030, as well as and net-zero emissions by 2060, according to the National Energy Transition Plan (NETP).

Objectives

The primary objective of the Centre is to actively support the development and deployment of renewable and clean energy technologies in Nigeria and Sub-Saharan Africa. This will help address the regional challenge of limited energy availability and access. The main focus areas include future energies, electrochemical systems, nanotechnology, and corrosion technology. Promoting local content is a core priority of the Centre.

Summary Of Implementation Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in Ph.D.	19	11	09	03	37	16	6	5
Enrolment in Master's Programmes	48	25	14	08	57	21	11	0
Enrolment in Short Courses	78	41	21	10	202	47	76	32
Internships	162				16			

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	2	
Partnerships	10	15
Accreditations	8	2
No. of Publications (journals, etc.)	57	

REVENUE ($)	Target	Actual
	955,000.00	696,271.80

PROJECT COST ($)	Original Allocation	Revised Allocation	Total Disbursed	%Disbursed
	6,000,000.00	5,809,779.00	5,751,681.00	99%

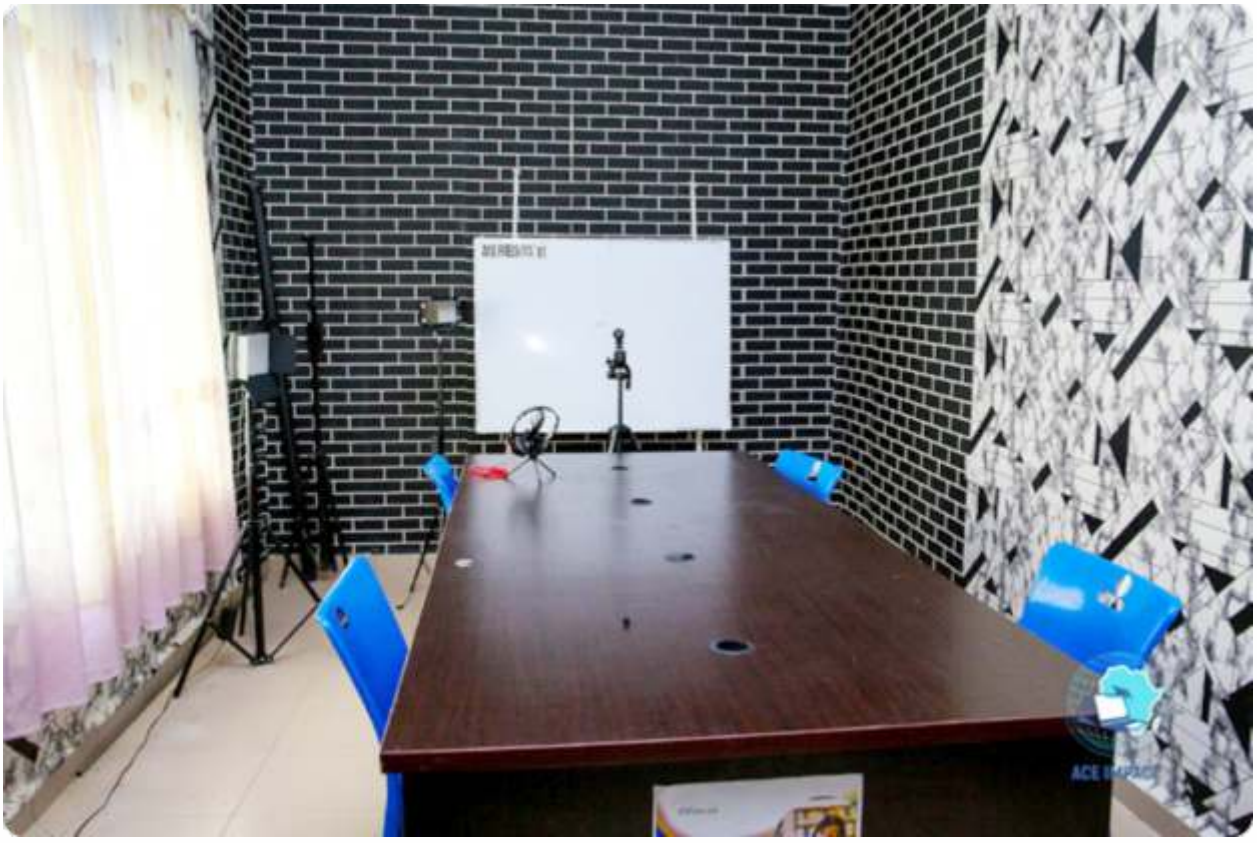
DLI PERFORMANCE (%)

DLI																							
1.1	1.2	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	7.6
		87		100	90	90		100	100	100	100	99	100	100	100	100		100		100		100	100

The Centre focused on developing advanced laboratory infrastructure in its key areas and skill development. As part of this, modern computation software was acquired, resulting in researchers using novel combinations of computational and experimental techniques to develop next-generation solar PV cells. Furthermore, the Centre is a member of a consortium of seven universities from six countries led by Swansea University project, termed “REACH-PSM”, which aims to facilitate and speed-up the development and local manufacturing of perovskite solar modules (PSMs) – the next-generation solar technology.

GALLERY OF FACILITIES AND ACTIVITIES





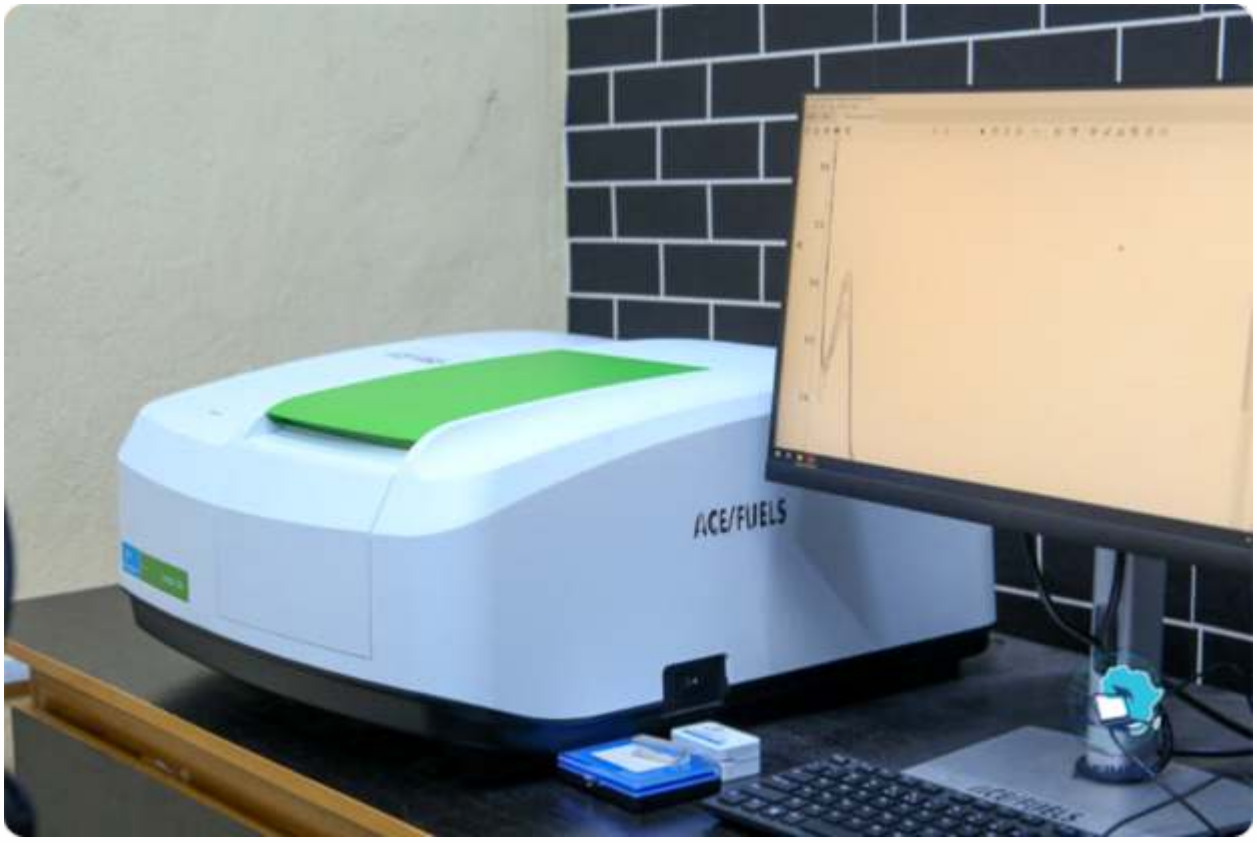

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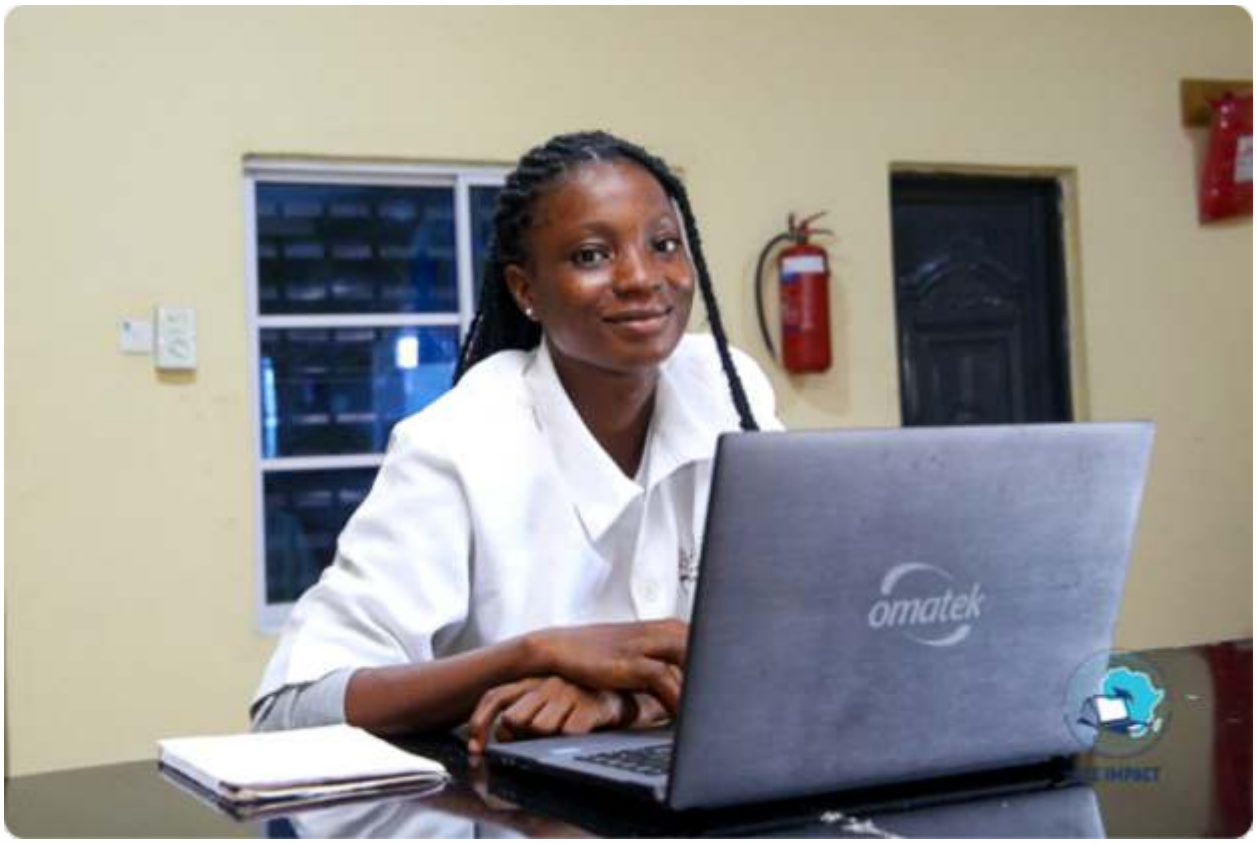

ACE IMPACT


labservice
ACE IMPACT


labservice

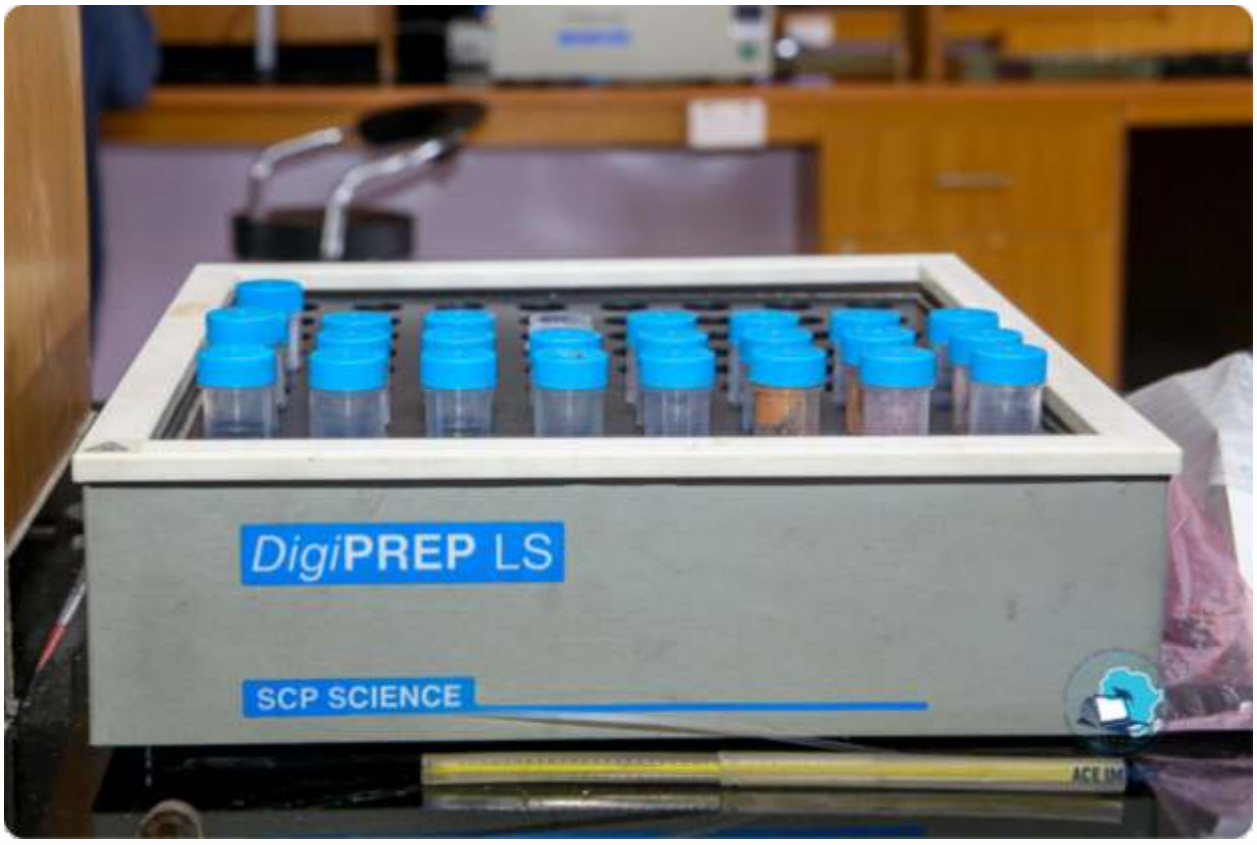



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BIOGOLD
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ACE FUELS


ACEFUELS/
MAGNETIC STIRRER HOT PLATE 85-2




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ATTENTION
NOTICE
ACE IMPACT


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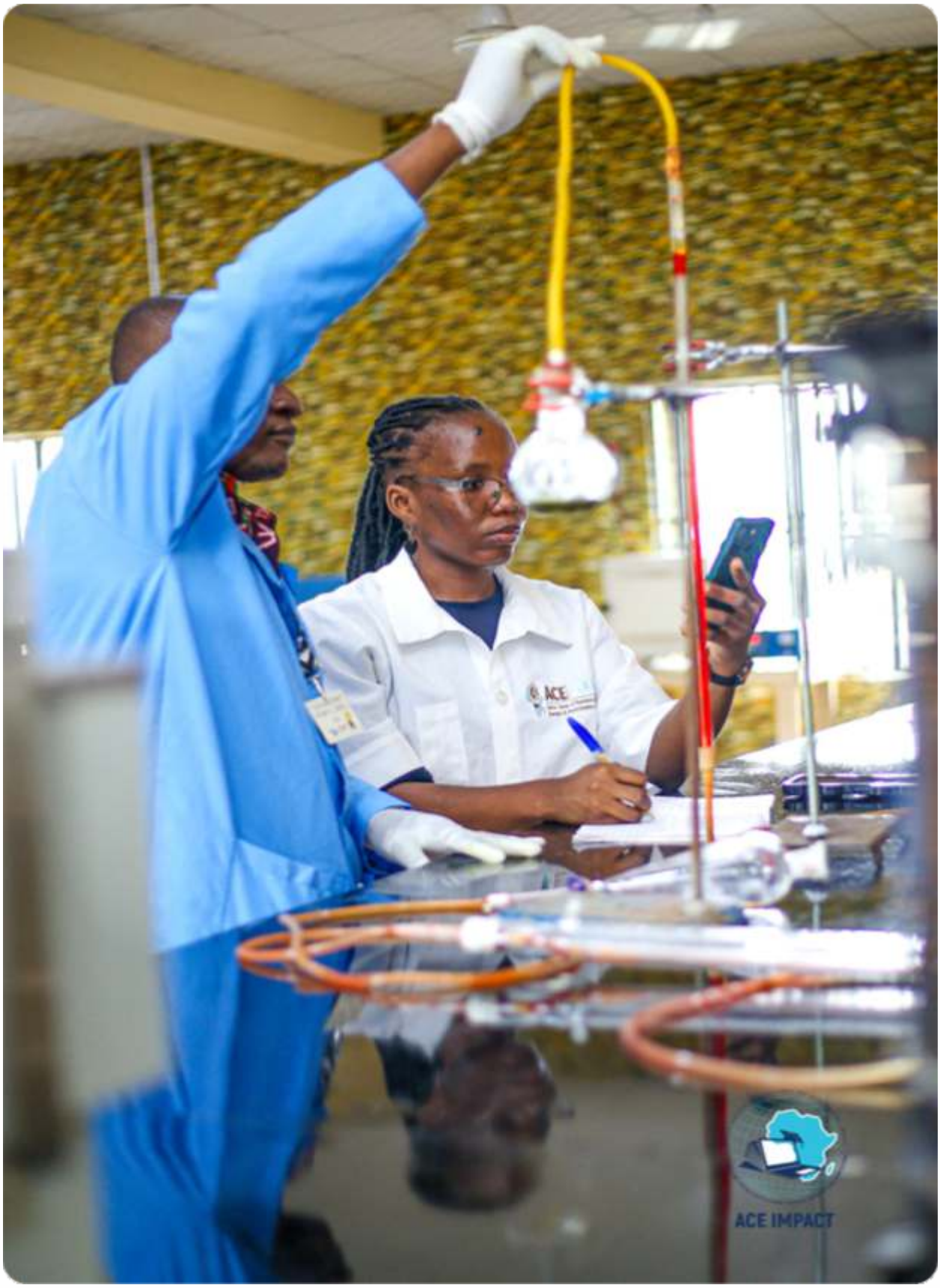



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FUELS





AFRICA UNIVERSITY OF SCIENCE AND TECHNOLOGY, ABUJA

PAN AFRICAN MATERIALS INSTITUTE(PAMI)

Introduction

The Pan-African Materials Institute (PAMI) is a regional Centre of Excellence in Materials Science and Engineering for training a critical mass of materials scientists and engineers to add value to the minerals and materials resources of Sub-Saharan Africa.

Summary of Performance

Description	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolment in PhD	100	50	75	50	75	25	26	10
Enrolment in Master's Programs	100	50	50	40	35	18	10	4
Enrolment in Short Courses	100	100	50	50	56	19	22	9
Internships	100	100	50	50	85	20	15	7

Publications

No. of Publications (Journals, etc)	169	
DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	0	0
Partnerships	8	13
Accreditations	1	1

Project Costs ($)

Original Allocation	Revised Allocation	Total Disbursed	% Disbursed
8,000,000	5,100,000	4,732,800	93

Revenue ($)

Target	Actual
5,000,000	4,600,000

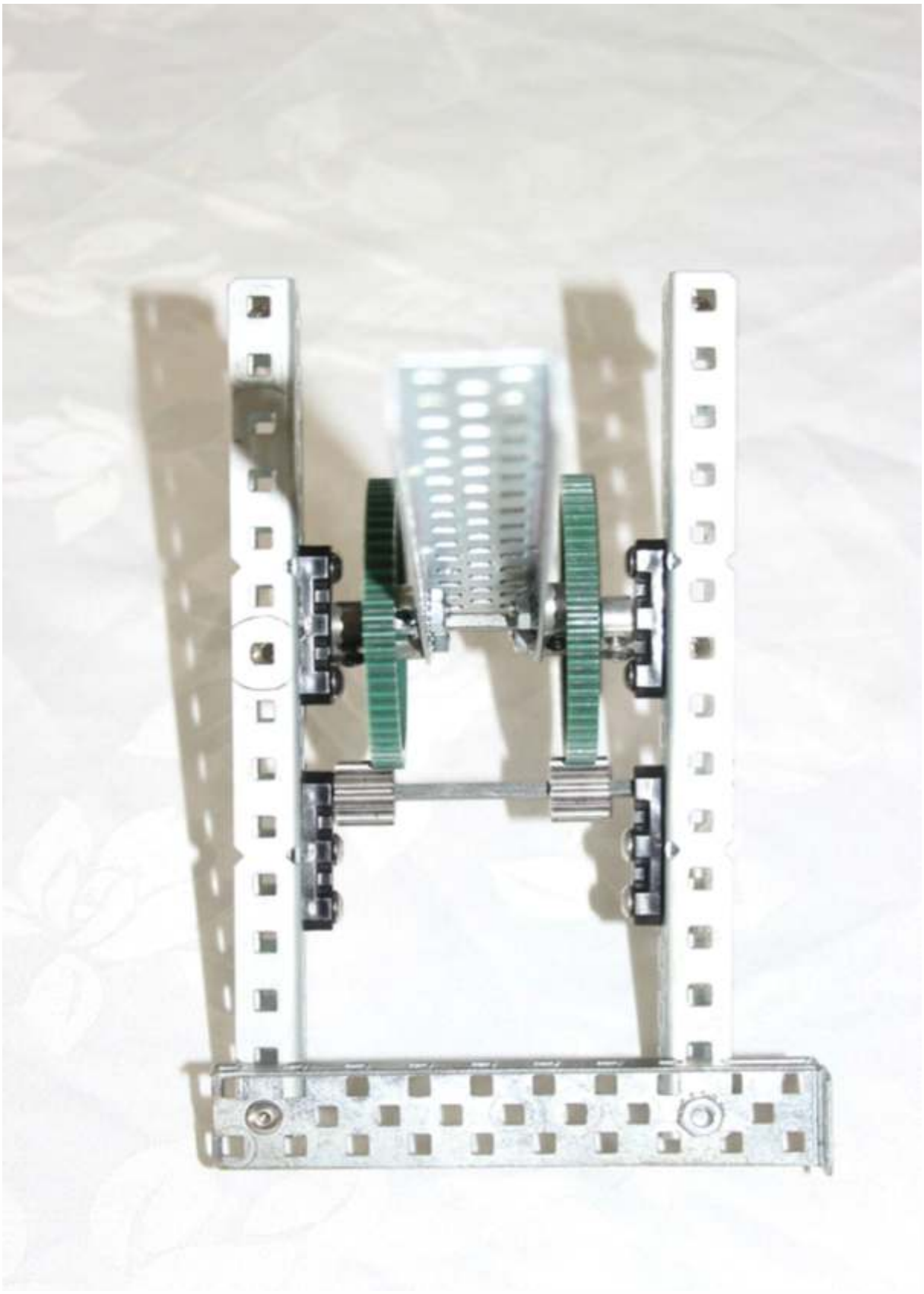
DLI PERFORMANCE (%)

DLI											
1.1	1.2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3	4
100		100	99	100	36	100	100	100	100	84	100

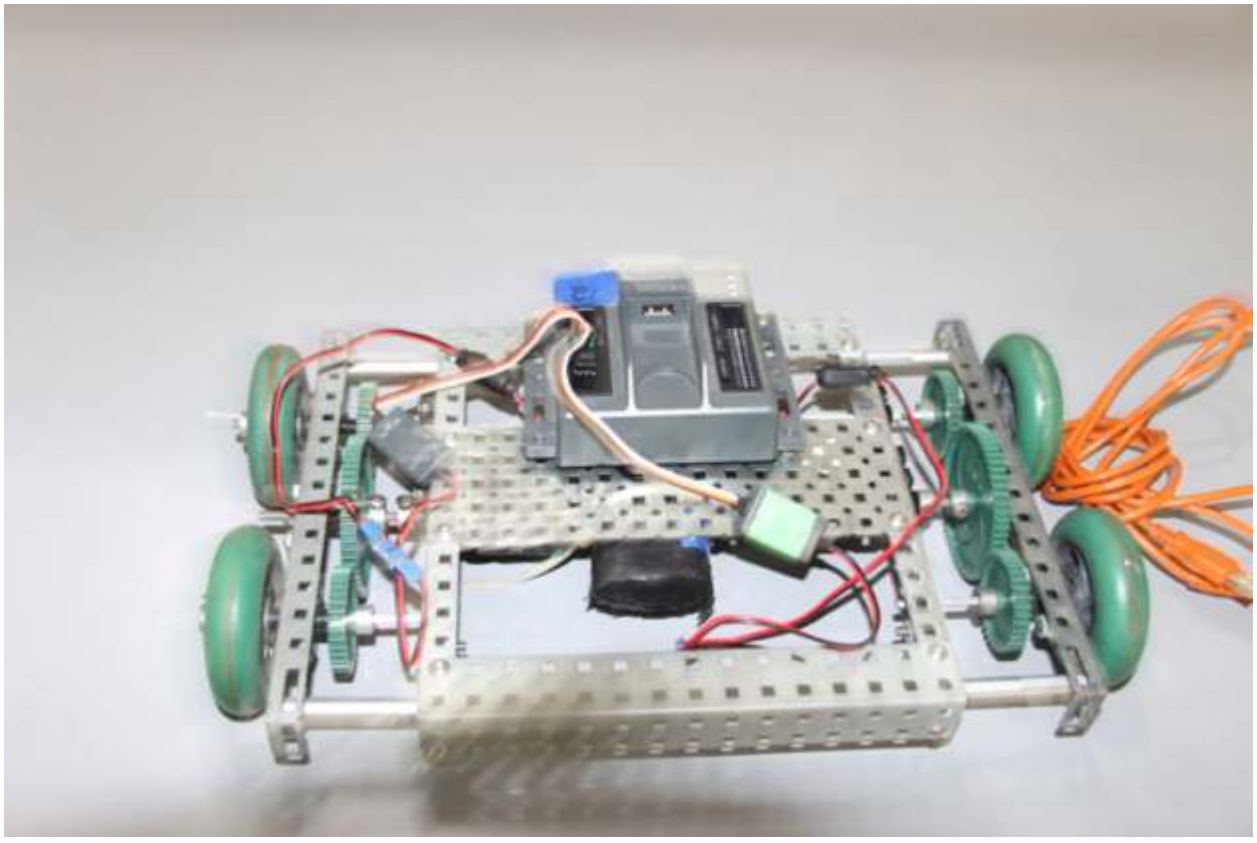
GALLERY OF FACILITIES AND ACTIVITIES














WATER




FILTER





UNIVERSITY OF JOS

AFRICA CENTRE OF EXCELLENCE IN PHYTOMEDICINE RESEARCH AND DEVELOPMENT (ACEPRD)

Introduction

The dire need to provide specialisation that addresses national and regional health challenges and strengthening capacity and the application of Phytomedicine research and development is key to addressing the strategic health goals of Nigeria and sub-Saharan Africa.

Objectives

The Africa Centre of Excellence in Phytomedicine Research and Development (ACEPRD) is aimed at achieving excellence in educational training and applied research in drug discovery, production and management of Phytomedicine and also facilitating an enabling environment that stimulates promising research and training. Further, it aims at facilitating dissemination, storage and sharing of academic, socioeconomic and cultural development in Nigeria and Africa at large.

Summary of Performance

DESCRIPTION	Target				Actual			
	National		Regional		National		Regional	
	Male	Female	Male	Female	Male	Female	Male	Female
Enrolments in PhD programmes	50	20	10	5	28	23	11	3
Enrolment in Master's programmes	150	50	30	10	120	78	70	30
Enrolment in short courses	100	50	10	5	69	36	3	1
Intenships	100	60	30	20	65	35	-	-

Publications

DESCRIPTIONS	NATIONAL	INTERNATIONAL
Patents	5	1
Partnership	10	6
Accreditation	1	1

Amongst other innovations, ACEPRD developed the first DNA Anti-Tick Vaccines and COVID-19 Herbal tea. It also produces scabiplus herbal lotion, scabiplus herbal shampoo and scabiplus herbal soap. The Centre transited into her sustainability phase on 1st June 2020 with focus on Research, Innovation, Commercialisation and Entrepreneurship (RICE).

GALLERY OF FACILITIES AND ACTIVITIES

















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