



**FEDERAL MINISTRY OF FINANCE,
BUDGET AND NATIONAL PLANNING**
(Budget and National Planning Arm)



**BIOSOURCES AND
TECHNOLOGIES LIMITED**



Innovation and Knowledge Transfer Partnership

**THE NEW ECONOMY FOR ACHIEVING
ECONOMIC DIVERSIFICATION, EMPLOYMENT
AND ECONOMIC GROWTH**

T H E M E :

**KNOWLEDGE TRANSFER:
CASSAVA & BIO-ETHANOL VALUE CHAIN
REPORT**

**SOUTH-EAST REGIONAL AWARENESS & SENSITIZATION
WORKSHOP ON BIO-ECONOMY, EMPLOYMENT AND INCLUSIVE GROWTH USING
CASSAVA-BIOETHANOL VALUE CHAIN DEVELOPMENT PROGRAMME PILOT**

DATE: 20TH JUNE, 2023 **TIME:** 9AM **VENUE:** TOSCANA HOTEL, ENUGU STATE



The Future is here - The New Bio-economy



HIS EXCELLENCY,
BOLA AHMED TINUBU (GCFR)
PRESIDENT AND COMMANDER IN-CHIEF OF THE ARMED FORCES
FEDERAL REPUBLIC OF NIGERIA



REPORT
2023

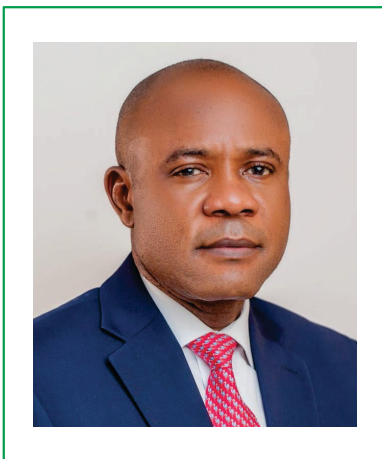


HIS EXCELLENCY,
KASHIM SHETTIMA (GCON)
VICE PRESIDENT OF FEDERAL REPUBLIC OF NIGERIA



ENGR. NEBEOLISA ANAKO
PERMANENT SECRETARY (FMFBNP)

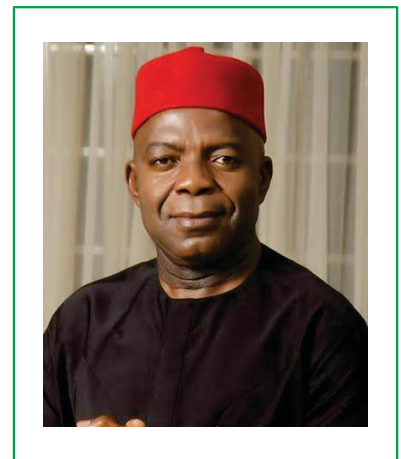
SOUTH EAST GOVERNORS



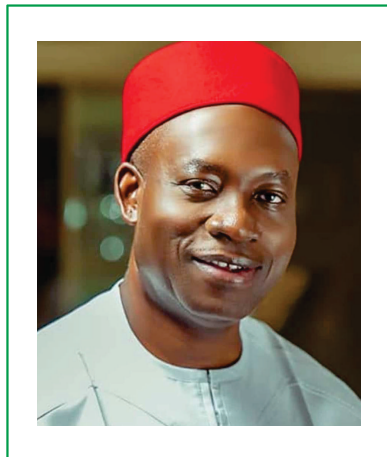
**HIS EXCELLENCY,
BAR. PETER NDUBUISI MBAH**
GOVERNOR OF ENUGU STATE



**HIS EXCELLENCY,
SEN. HOPE UZODINMA**
GOVERNOR OF IMO STATE



**HIS EXCELLENCY,
DR. ALEX OTTI, MFR**
GOVERNOR OF ABIA STATE



**HIS EXCELLENCY,
PROF. CHUKWUMA C. SOLUDO**
GOVERNOR OF ANAMBRA STATE



**HIS EXCELLENCY,
RT. HON. FRANCIS OGBONNA NWIFURU**
GOVERNOR OF EBONYI STATE

**REPORT OF THE REGIONAL AWARENESS
SENSITIZATION WORKSHOP ON THE IMPLEMENTATION
OF THE NIGERIA BIO-ECONOMY FRAMEWORK,
SOUTH-EAST REGION**

**Held At Toscana Hotel, Enugu, Enugu State
On The 20th June 2023**

**WORKSHOP THEME: Knowledge Transfer, Cassava Value
chain and Bioethanol/The New Economy For Achieving
Economic Diversification, Employment
And Economic Growth**



**ORGANIZED BY THE
FEDERAL MINISTRY OF FINANCE, BUDGET, AND NATIONAL PLANNING (MFBNP)
(Budget & National Planning Arm)**



AGENDA:

REGIONAL AWARENESS & SENSITIZATION WORKSHOP ON BIO-ECONOMY, EMPLOYMENT AND INCLUSIVE GROWTH USING CASSAVA-BIOETHANOL VALUE CHAIN DEVELOPMENT PILOT

S/N	ACTIVITY	RESPONSIBLE PARTY
	DAY 0:	<ul style="list-style-type: none"> Advance Party Pre-event Cocktail & Courtesy Visit to H.E, The Executive Governor
DAY 1: PLENARY / TECHNICAL SESSION		
PART A: PLENARY		
1	REGISTRATION	<ul style="list-style-type: none"> ALL
2	National Anthem	<ul style="list-style-type: none"> ALL
3	Recognition of Dignitaries	<ul style="list-style-type: none"> Compere
4	Welcome Address by the Chief Host	<ul style="list-style-type: none"> The Permanent Secretary FMFBNP, Engr. Nebeolisa Anako
5	Brief Remarks:	<ul style="list-style-type: none"> All Governors of the Region Representatives VC's of Partner Universities Representatives of Key Partner MDAs and TETFUND
6	Remark by the Special Guest of Honor	<ul style="list-style-type: none"> HE, The Governor of the Host State
7	Group Photographs	<ul style="list-style-type: none"> Compere
TEA/COFFEE BREAK		
8	Keynote Address: Overview of the Nigerian Bio-economy and the Triple-Helix Partnership approach and Conceptual Design Framework for the Organic Cassava-Bioethanol Pilot.	<ul style="list-style-type: none"> Prof. Ken Ife
PART B: TECHNICAL SESSION		
9	PANEL SESSION FOR STATE COMMISSIONERS & MDAs	<ul style="list-style-type: none"> State Commissioners to discuss state support to Cassava Value Chain Development and development partners assistance. Measures to promote Bio-Entrepreneurship and consider entry points to the programme
SYNDICATE SESSIONS		
10	SYNDICATE 1: HYBRID CASSAVA FOUNDATION SEED MULTIPLICATION (TME 419 / OBASANJO – 2/HOPE etc) & CASSAVA GROW -OUT CHAIR: NSPRI CO-CHAIR: ADAN President Prof. O.J. Jayeoba RAPPORTEUR: Prof. Martin Anikwe	<ul style="list-style-type: none"> Panel Discussions on seed selection, propagation, distribution, mechanisation, planting, Grow-out, input, farm maintenance, harvesting and produce aggregation and recommendations.
11	SYNDICATE 2: CASSAVA VALUE CHAIN PROCESSING CHAIR: IITA CO-CHAIR: NSPRI RAPPORTEUR:	<ul style="list-style-type: none"> To discuss challenges and prospects on the gradual build-up of processing capacities and value addition to multiple exportable products up to Bio-ethanol and bye-products for animal feed.
12	SYNDICATE 3: BIO-ENTREPRENEURSHIP	



CHAIR: NERDC Executive Secretary

CO-CHAIR: ADAN

RAPPORTEUR: Shulamite Paul

- Bio-entrepreneurship which is the flow of innovation to the industry and the curriculum response will be developed to all levels of education: Masters/Bachelors/Diploma/TVET/Secondary School SS1 – SS3/Primary Schools

13 SYNDICATE 4: INNOVATION CHALLENGE FUND & DEVELOPMENT FINANCE INTERVENTIONS

CHAIR: CBN

CO-CHAIR: BOI

RAPPORTEUR: SMEDAN / NIRSAL

- Review of the various development finance intervention from the CBN, blended finance options. Green Bond, Climate Fund, Carbon Credit, GEF and other innovative finance mechanisms.
- Discussions around cassava bio-ethanol value chain product Single digit revolving loan fund.

LUNCH

14 **CLOSING:**

- Presentation of report by syndicate chairs

15 **PLENARY & FEEDBACK OF SYNDICATE CHAIRS**

- Presentation of Plaques

16 **CLOSING REMARK / VOTE OF THANKS**

- Instructions & Confirmation of Site Visits

DAY 2:

17 **DAY 2:**

- Syndicate officials/chairs to review and update recommendations of work groups and harmonize and align recommendations.
- Agree planting calendar
- Site Visits / Tours
- Inaugurating Regional Contact Group and Planning reception

DAY 3:

19 **CLOSE DOOR SESSION**

- Debriefing sessions of the Regional Contact Group
- Tours of farms
- Departure



Preamble:

The South-east Regional Sensitization workshop was organized as a follow-up to the National Sensitization Workshop and as well as the National Stakeholder Implementation workshop earlier organized by the Federal Ministry of Finance, Budget, and National Planning as part of awareness creation aimed at driving more inclusive partnership among the identified critical stakeholders for the implementation of the Nigeria Bio-Economy Programme.

The South-east regional Workshop is part of the implementation arrangements for the Cassava Bio-Ethanol Project pilot designed to leverage cassava to produce Bioethanol and other cassava derivatives including Industrial Starch, Pharmaceutical, Starch, Chips, sorbitol Animal feeds and Ethanol.

The sensitization workshop had participants from the five (5) South-eastern States Abia, Anambra, Ebonyi, Enugu and Imo respectively with players from Top Government Functionaries, the Agribusiness sector, Academia including representatives of Government Ministries, Departments and Agencies (MDAs) and Cassava Farmers from all the five states were in attendance.





ENGR. NEBOLISA ANAKO

Permanent Secretary,
Budget & National Planning

WELCOME REMARKS BY THE PERMANENT SECRETARY, ENGR. NEBOLISA ANAKO

The Permanent Secretary, Federal Ministry of Finance, Budget, and National Planning (FMFBNP) Engr. Nebolisa Anako in his opening address welcomed all stakeholders and thanked them immensely for the massive turn out for the South-East Regional Sensitization workshop on the Nigeria Bio-Economy Framework and the Implementation of the Cassava Bio-Ethanol Project Pilot.

In his remarks, the Permanent Secretary stated clearly that the time to explore feasible alternatives to the energy crisis, unemployment, the Pressure on the Foreign Exchange, slow GDP Growth rate, the unfathomable Bio-Waste in the country is now and Bio-Economy presents the feasible alternatives.

He assured stakeholders of the Federal Government commitment to the project and therefore thanked all stakeholders for their efforts and active participation in the project activities thus. He did mention that one of the quick succors to the effects of the Fuel subsidy removal is for the country to develop alternative energy sources and as far as the Cassava Bio-ethanol project pilot is concern, every farmer in Nigeria is a stakeholder.

Concluding, He thanked the Host Governor Dr. Peter Mbah for the warm reception and the rest of the South-East Governors for their prompt response and commitment to making this project work in the south-East states.

GOODWILL MESSAGES

The distinguished dignitaries at the event took their turn to deliver their Goodwill Messages

HIS EXCELLENCY THE EXECUTIVE GOVERNOR OF ENUGU STATE DR. PETER MBAH (FOR AND ON BEHALF OF THE GOVERNORS OF ABIA, ANAMBRA, EBONYI AND IMO STATES)

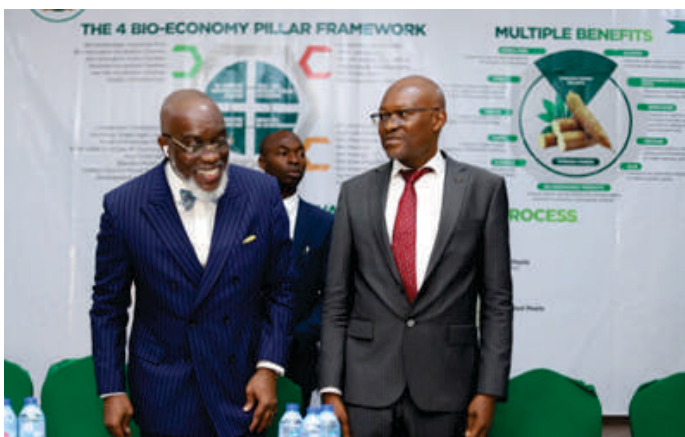
The Executive Governor of Enugu State Dr. Peter Mbah who was represented by the Secretary to the State Government, Prof. Chidiebere Onyia welcomed all stakeholders to Enugu for the Regional Sensitization Workshop. He reiterated the commitment of Enugu State and by extension that of the Governors of Abia, Anambra, Ebonyi and Imo State to the project. He maintained that a situation where Nigeria is the largest producer of Cassava, consumed 90% of production domestically in form of food and leaving just 10% to industrial processing is very limiting in terms of value additional for better economic gains and believes that through this project, the narratives will be changed.



He emphasized that the successful implementation of this laudable project will create employment for the youths, boost the economy, reduce the region's carbon footprint, Yet the location of the Bio-Ethanol refinery in the Enugu Free Trade Zone; Enugu Empower is another strategic pillar to promote exportable products from the cassava value chain.

He re-echoed the commitment of the State Governors of Abia HE Dr. Alex Otti, Anambra, Dr. Chukwuma Soludo, Ebonyi Rt. Hon. Francis Ogbonna Nwifuru and Imo State Senator Hope Uzodinma whom the Governor assured he spoke to them, and they mandated him to speak on their Behalf.

"I echo the yearnings of all the rest of the State Governors and pledge their total commitment to the project. The Triple Helix Knowledge Transfer Partnership under the Bioethanol and Bio-Entrepreneurships activities is indeed a deal Breaker for the southeast and Nigeria at large and I thank the organizers of the event and the project" His Excellency Concluded.



PROF. CHIDIEBERE ONYIA

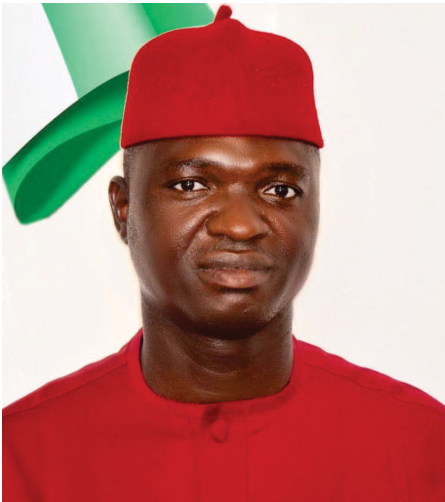
The Secretary to Enugu State Government

ENGR. NEBOLISA ANAKO

Permanent Secretary, Budget & National Planning at the Workshop



REPORT
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**RT. HON. FRANCIS
OGBONNA NWIFURU**
Executive Governor, Ebonyi State

HIS EXCELLENCY, EXECUTIVE GOVERNOR OF EBONYI STATE RT. HON. FRANCIS OGBONNA NWIFURU

In a Goodwill Message by His Excellency the Executive Governor of Ebonyi State Rt. Hon. Francis Nwifuru, he appreciated the Federal Ministry of Finance, Budget, and National Planning (FMFBNP) for this laudable programme aimed at maximizing the potential of Cassava Crop in Income generation and job creation in the Country.

Represented by his Special Assistant, the Governor reiterated the commitment of the State to the project and pledge total support to it as he did mention that Ebonyi State is already supporting smallholder farmers

to produce cassava massively and this project, he assured to do more to promote the Bio-Economy activities.

REPRESENTATIVE OF THE VICE CHANCELLOR OF UNIVERSITIES IN THE SOUTHEAST REV. FATHER PROF. CHRISTIAN ANIEKE

Prof. Christian Anieke, Vice Chancellor, Geoffrey Okoye University, Enugu who spoke in company of the Vice Chancellor of Michael Okpara University of Agriculture, Umudike Prof. Maduebibisi Iwe for and on behalf of the Vice Chancellors of Universities in the South-East, thank the President of the Federal Republic Asiwaju Ahmed Bola Tinubu and the Ministry for putting together this project for the country. He assures of the Universities management commitment to device modalities for the implementation of the cassava value chain and to create awareness at the University level and ensure buy in of all Vice Chancellors in the region.

He said that Nigeria is also a champion in cassava by producing 21% of the world cassava and followed by Congo (14%) and that the right thing for the country to do it to also become a champion in Processing and he is convinced that this what the Project is about to achieve for the country.

Similarly, Prof. Iwe pledged their commitment to ensuring that proper value addition is achieved beyond the usual products.

VC MOUA. Drive the value addition to cassava beyond the usual. Pledge total commitment.



**Prof. Iwe and Prof. Anieke delivering
their Goodwill Messages on behalf
of Vice Chancellors in the South-East**



PROF. F.M DAVID-ABRAHAM

BOT Chairperson,
Association of Deans of Agriculture
in Nigerian Universities (ADAN)

CHAIRPERSON, BOT, ASSOCIATION OF DEANS OF AGRICULTURE IN NIGERIA UNIVERSITIES (ADAN)

Speaking for ADAN, Prof. F.M David-Abraham commended the organizers of the event and the demonstrated commitment thus far and reiterates ADAN total commitment to seating beside the Ministry in the Project drive as the implementer in the Academia. He assured the team that ADAN has put in place all arrangements for the Cassava Stem multiplication for the Project and that efforts are also ongoing on the Bio-Entrepreneurship Curriculum Development exercise.

He took the participants down the memory lane down to the creation of ADAN in 1958 and the Association since then has been at the forefront of Agricultural Education and development in the country.

PRESENTATION OF THE KEYNOTE PAPER BY PROF. KEN IFE, MD/CEO BIO-SOURCES & TECHNOLOGY LIMITED AND CONSULTANT TO THE PROJECT.

Professor Ken Ife gave a technical presentation and overview of the entire project and summarized the key areas of focus for the Bioeconomy project of the country looking at its importance from the point view of Agriculture/Forestry, Pharmaceuticals, Foods & beverages, consumer goods, Energy, Chemical Industry, Textile/Clothing, Building Industry and Mechanical Engineering as all key areas that will benefit and contribute to the Bio-Economic activities of Nigeria.



PROF. KENNETH IFE, MD/CEO

Biosources & Technology Ltd,
Delivering Keynote Paper
at the Workshop

He further stressed that through the Bio-economic activities of this project, it will contribute directly and fast track the achievement of eleven (11) out of the 17 Sustainable Development Goals in Nigeria. (Goal 1,2,3,6,7,8,9,12,13,14 and 15) and indirectly contribute to the other 6 goals of the SDGs.

And he emphasized on ensuring reduction in Bio-waste and the overall Nigeria Carbon Footprint, economic diversification, job creation and foreign earnings. He concluded by saying that "Bio-Economy is the economy of the Future, and the future is now".



DR. AMANZE OKERE
of ICRC, Delivering his Paper
at the Workshop

PRESENTATION BY REPRESENTATION OF ICRC

The representative of Infrastructural Concession Regulatory Commission (ICRC) Dr. Amanze Okere gave a brief presentation of what ICRC represents, the steps in Public Private Partnership which are basically designed and structured to create synergies between Government and private sector plays to bridge infrastructural gaps in Nigeria.

He outlined the processes and further encourage stakeholders to explore PPP options in their project delivery. Dr. Amanze did mention that there is USD 2.3 trillion Investment requirement in the country. He stated that as of May 2023, that there are 82 Post-contract PPP Projects in Nigeria. 175 Outlined Business Case

Compliance certificate has been issued and 203 pre-contract PPP Projects and that between 2010 NS May 2023, ICRC has approved 103 PPP Projects worth 10 Trillion Naira.

He therefore encouraged more stakeholder's participation in PPP through partnership with ICRC to boast the country's Infrastructure.



PANEL SESSION FOR STRATEGIC STAKEHOLDERS

There was a brief panel discussion for strategic stakeholders selected from the region including the Academia, Government top functionaries, lawmakers and farmers WHO discussed and shared their experiences in the Cassava Value chain.

The Panel Discussants shared their perspectives and experiences in the Cassava project and shared their thoughts as well on how best the project implementation can be strengthened. The Participating Universities including Enugu State University of Science and Technology (ESUT), Ebonyi State University, University of Nigeria Nsuka (UNN) among others mention their current involvement in cassava production. However, much is yet to be done in terms of Value addition by the organizations involved in the cassava producers.



SYNDICATE GROUPS DISCUSSIONS AND SUMMARY OF REPORTS

Syndicate Group 1: Cassava seed/Stem Multiplication for the project

Task: To discuss the modalities and processes for the multiplication of Cassava Stems for the project

Group Chair: Prof. Peter I. Ezeaku

Rapporteur: Ogirinye Innocent A

Summary of Syndicate Group Report

After extensive discussions by the group members who were drawn from Farmers Group, Academia, Agribusiness Experts, Researchers and Government functionaries.

At the end of the Syndicate session, the following recommendations were made:

- The TME 419 Cassava Variety is suitable for the South-east and performs very well.
- Mechanized Planters, Motorized Cassava Weeders and Harvesters should be promoted under the Project.
- That Cassava Production begins in April in the southeast States and Late planting is only feasible in September and therefore timeliness in project inputs delivery should be strictly adhered to
- To properly commercialize the Cassava Production in the East, Land Development/Bush clearing should be promoted by the Project.
- There is a high shortage of Extension services for farmers in the region and therefore, adequate provision for Farm Extension personnel should be made.
- Herdsmen invasion of farms is still very high in the region and adequate measures should be made to safeguards the farm investment in the region,

SYNDICATE TWO: CASSAVA VALUE CHAIN PROCESSING

Chairman: Dr Okorie Okoro Ndukwe

Rapporteur: Ede Lawrence Ibeabuchi

Task: To discuss the challenges and prospects on the gradual buildup of processing capacities and value chain to multiple exportable products up to bioethanol and bye products for animal feeds.

Recommendations

The syndicate recommends the following.

- Siting training and capacity building in various location for farmers utilization
- Networking of members in the value chain for technology transfer, market penetration, etc.
- People should be encouraged to go into chips production to encourage the bioethanol production.
- Further research work should be encouraged, and output of the research should be commercialized for those in the value chain to upgrade their knowledge and hence, their capacity.
- Training on the conversion of cassava peels for animal feed is highly requested and should be subsidized by this project.





SYNDICATE 3 TOPIC: Bio-Entrepreneurship- Flow Of Innovation To The Industry. Developing Curriculum For All Levels Of Education.

Chairman: Prof. F.M David-Abraham
Rapporteur: Prof. Francis C. Ekwu

Task: To discuss modalities and processes for developing Bio-Entrepreneurship Curriculum and its implementation



Recommendations:

- The study of entrepreneurship should be made compulsory in all educational institutions in Nigeria. This should be backed up with appropriate legislations.
- Cassava processing has different unit operations that constitute bottleneck in the cassava value chain. Therefore, simple equipment for cassava processing should be developed to attract young people to agricultural activities.
- Entrepreneurship in cassava production, processing and distribution is limited by lack of enabling agriculture infrastructure such as irrigation which is capital intensive. There should be policy statement from government on provision of agricultural infrastructure.
- Training in agriculture should be more practical based. The curriculum should be more of on hands training than teaching theoretical concepts.
- Public office holders, politicians and successful businessmen should model bioentrepreneur ship so that younger generations would see the benefits in Bio entrepreneurial activities.
- Successful bio-entrepreneur can be possible if there is multi-sectorial approach. This involves all experts from different disciplines to network and work together. For this to work, the curriculum should include group activities in all levels of education.
- There should public, private, partnership approach in Nigerian schools. This will make information and resources sharing possible, which will enhance bio-entrepreneurial studies.
- Government should support people involved in bio-entrepreneurial activities with loans. However, we observed that some may collect the loan and use the money to travel out of the country. To solve the problem, the group suggest a strong re-introduction of moral education through strong religious studies in all levels of schools in the country. This will engender the fear of God in the mind of the recipients of such loan and hence they will be more honest.

The details of the Syndicate Group reports are here attached as Appendix 1, 2 and 3



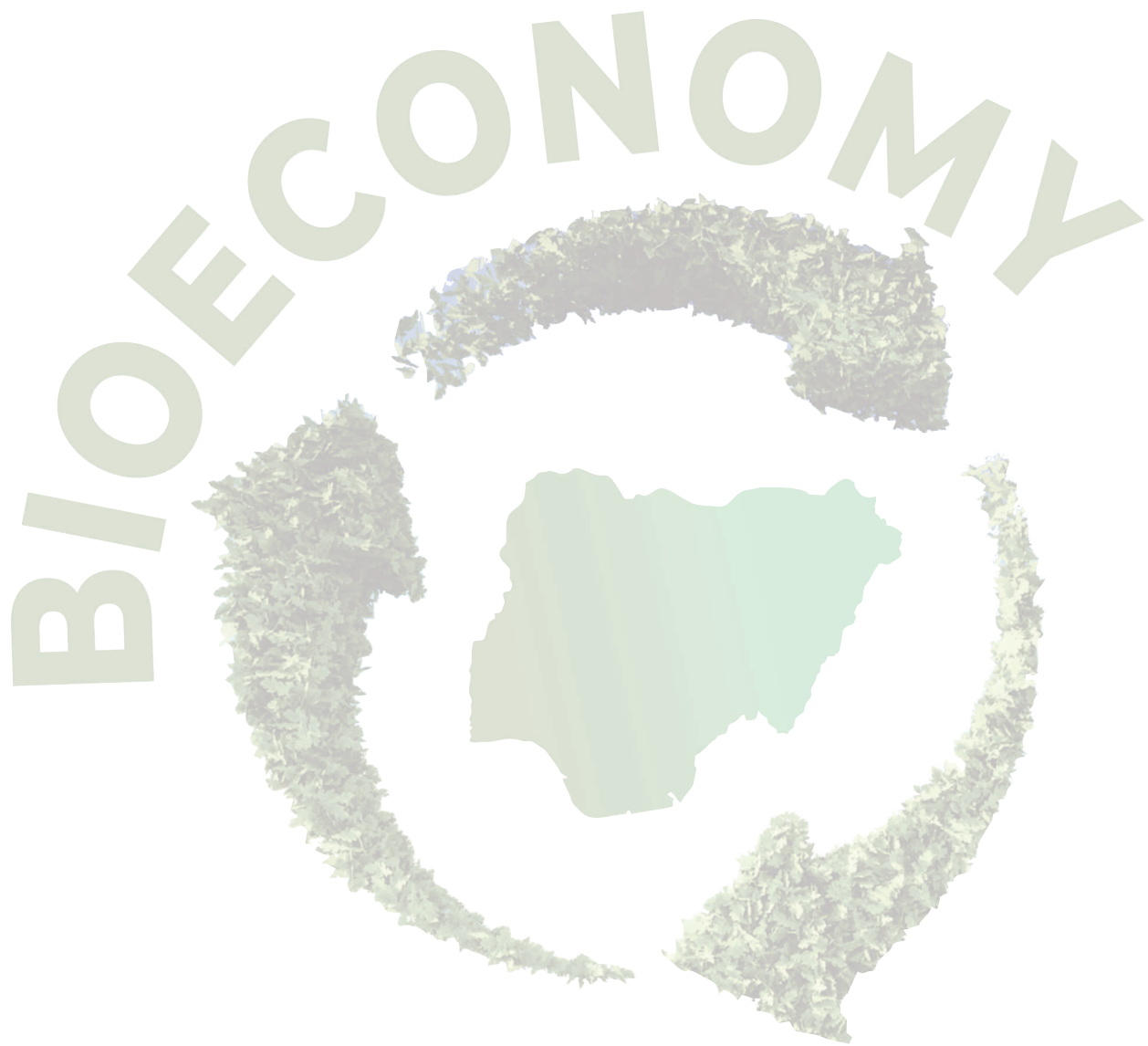
FIELD VISIT TO GODFREY OKOYE UNIVERSITY BIO-TECHNOLOGY LAB

The day 3 of the workshop was a visit to Geoffrey Okoye University Enugu where various research workshop, capacity building and processing activities are on-going in collaboration with different foreign partners including investors from European countries who are investing massively in the Centre and building local capacities of Nigerians in the areas of Biotechnology.

CONCLUSION

In summary, the southeast regional Sensitization Workshop was indeed a huge success and it witnessed massive turn-out from stakeholders in the Agribusiness.

The various recommendations from the syndicate groups and the Strategic stakeholders panel session are indeed useful and will help in the seamless project implementation in the region.



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