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Aliyu Abdulhameed's Bold Strides with NIRSAL 2015 – 2020

2021 and beyond...The Strategic Imperatives



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3,203 Cooperatives, Over Half a Million Farmers join the NIRSAL Agro Geo-Cooperative® Model





From our Managing Director/ CEO

Mr. Aliyu Abdulhameed

Dear Reader,

Congratulations! A very turbulent year is now behind us. In spite of the unprecedented challenges the COVID-19 pandemic threw at us a nation and members of a global community, we dug deep, demonstrated great resilience, and weathered the storm. In the face of harsh circumstances, it is in our collective DNA to, not just survive, but thrive. I know so because I am fortunate to be leading many young, resourceful and resilient Nigerians in NIRSAL.

Three months into 2021, we have made some headway in the pursuit of our mandate, while juggling the imperatives of remaining productive and keeping our people safe from the dreaded second wave of the Coronavirus pandemic. Our situation is no different from those of our stakeholders, partners and beneficiaries in the agriculture and agricultural finance value chains who are navigating very challenging times and circumstances.

In the course of the last 15 months, we facilitated the flow of over NGN30billion into agricultural value chains from commercial banks and other sources. Being acutely aware that our work is critical to the activation of the operations of food producers and dealers in by products therefrom, we cannot afford to relent in structuring projects, enrolling actors, and sourcing and deploying

finance across Nigeria's agricultural landscape.

The foregoing simply means that our numbers will continue to grow. As of the end of 2020, NIRSAL had facilitated over NGN148billion in finance and investments for agriculture and agribusiness. This is in addition to the aggregation of over 3,000 Agro Geo-Cooperatives® with 500,000 farmers on nearly 800,000 hectares of land. We are taking these strides towards the short-term target of 8 million smallholder farmers on 4 million hectares of land.

Furthermore, over 1.4 million persons have utilized NIRSAL's innovative index-based insurance products which protect farmers from risks posed by the elements. Our efforts so far have been more about gainfully engaging the majority of smallholder farmers who are predominantly in rural areas, boosting and optimizing production, as well as building a reliable supply chain for Nigeria's industries.

To curb Nigeria's notoriously high post-harvest losses and boost produce haulage and supply across the country, NIRSAL is championing advocacy for the implementation of a Secured Agricultural Commodity Transport and Storage Corridor (SATS-C). I pledge NIRSAL's continued support for the Federal Ministry of Industry, Trade



As of the end of 2020, NIRSAL had facilitated over N148billion in finance and investments for agriculture and agribusiness... over 1.4 million persons have utilized NIRSAL's innovative index- based insurance products which protect farmers from risks...

and Investment (FMITI) as they develop the policy for executive consideration and assent.

It is contextually important to restate that NIRSAL post-CBN is only 5. The entire time spent chasing the achievements aforementioned has also been used to build the organization and populate it with the right personnel. In the past year, we further improved our structure and systems, maintained compliance with the International Financial Reporting Standards and successfully implemented the Balanced Scorecard performance management approach.

These have helped us build a nimble institution that is able to deliver projects without compromise on time, quality and customer satisfaction. Consequently, the numbers that matter to all our stakeholders continue to grow: a balance sheet size of over N140billion, with 1,415% and 87% growths in equity and total assets respectively. These are in addition to NIRSAL's growing list of beneficiaries across the country.

We are determined to continue to improve, standardize and take our concepts to scale in 2021 and beyond. By picking commodities according to their ecological advantage, using a market-driven approach, ensuring the inclusion of smallholders, adopting integrated value chain-

based business models, and layering robust de-risking mechanisms on all our projects, we have built sufficient guardrails for a sustainable foray into the future.

With 2021 now in full swing, we have gained a fair idea of the challenges we would have to navigate to more than double the current number of Agro Geo-Cooperatives® across Nigeria's agricultural landscape. We would also repropose the value we bring to sub-national economies through optimized agriculture to state governments in the hope that they will opt to leverage our unique platform for job creation, food security and economic development.

If forecasts are anything to go by, some days will continue to be smoother than others in 2021. Our best wishes, coupled with support in our capacity as a vehicle for rural and industrial development, are pledged to governments at all levels as they grapple with the socio-economic realities of this age. What we call the NIRSAL spirit keeps us primed for success at NIRSAL this year; it is but a microcosm of the *"Naija Spirit"*, and thus speaks volumes of the great things we can achieve as a nation in spite of the menacing tides.

Best wishes!

Aliyu Abdulhameed's Bold Strides with NIRSAL 2015 – 2020

2021 and beyond...The Strategic Imperatives



L-R: Representative of the Emir of Zazzau; Aliyu Abdulhameed, Managing Director/CEO, NIRSAL; and Regional Manager of Stanbic IBTC Bank at Hulhulde Nigeria Ltd's premises in Zaria – beneficiaries of NIRSAL's CRG facility.

INTRODUCTION

Aliyu Abdulhameed was appointed as MD/CEO of NIRSAL Plc, a wholly-owned corporation of the Central Bank of Nigeria (CBN), created in 2013 to stimulate the flow of affordable finance and investments into the agricultural sector by de-risking the agribusiness finance value chain, fixing agricultural value chains, building long-term capacity, and institutionalizing incentives for agricultural lending.

In five (5) years of leading NIRSAL from 23 December 2015, Aliyu Abdulhameed has built NIRSAL from near-zero to a position of national, continental and global recognition as an authority in agricultural risk management and financing.

Aliyu's 5-year Scorecard gives an account, across various performance dimensions, of how he has led NIRSAL to

challenge the status quo, ask the tough questions and design game-changing systems and solutions for agricultural risk management, value chain development and financing. The results are obvious in terms of:

- the adoption of optimized models and risk management tools by actors in agricultural value chains and agriculture finance;
- finance and investment facilitated for agricultural value chain actors;
- jobs created and sustained; and
- lives positively impacted.

In addition, the 5-year scorecard also shows Aliyu's business acumen and stewardship having grown NIRSAL's bal-

ance sheet, strengthened its financial position and built strong organizational capacity in the form of people, processes, systems and structures.

His achievements cut across the following key performance areas:

1. Facilitating Agribusiness Finance and Investment
2. Facilitating Agricultural Insurance
3. Agricultural Value Chain Development
4. Guarantee Portfolio and Project Risk Management
5. Financial Growth and Stewardship
6. Organisational Capacity Development
7. Impact in Nigeria, Africa and the Globe

Aliyu's achievements in the leadership of NIRSAL and the game-changing, sustainable interventions introduced are visible and attested to by serious-minded actors in the local and international agricultural value chain and agriculture value chain finance spheres.

HIGHLIGHTS OF ALIYU ABDULHAMEED'S 5-YEAR SCORECARD ACHIEVEMENTS

1. Facilitating Agribusiness Finance and Investments

Through innovative approaches and instruments aimed at eliminating risks associated with agriculture, NIRSAL, under the leadership of Aliyu Abdulhameed has successfully assuaged the fears of financiers and investors in bringing in finance and investments into agriculture and agribusiness.

- Funding in the sum of NGN145billion has been facilitated to various actors for mechanization activities, input distribution, and the production, processing, trading and marketing of agricultural commodities from various sources.
- Abdulhameed has grown the NIRSAL CRG as a symbol of trust for lenders and investors. Over 26 financial institutions are using the NIRSAL Credit Risk Guarantee (CRG) instrument to minimize possible losses in financing agribusinesses.
- Because of NIRSAL's solutions, commercial banks have pledged to provide an additional NGN160billion to fund agriculture, provided the NIRSAL guarantee and its structured approaches are in place.
- NIRSAL has trained over 2,600 staff of financial institutions and engaged with 17 Bank Management Credit Committees for capacity building, joint product development, and bottom-up and top-down engagements for financing commitments.
- The rate of bank lending to agriculture has risen from 1.4% at inception to 4.49% as at December 2020.

2. Facilitating Agricultural Insurance

Under the leadership of Aliyu Abdulhameed, NIRSAL has moved the Nigerian agriculture sector from indemnity-based to Index-based Insurance as a major sector risk management strategy.

- Within two years of intervening in agricultural insurance, from 2017 to 2019, the number of smallholder farmer subscriptions to agricultural insurance rose exponentially to 1.8 million with the NIRSAL Area Yield Index Insurance (AYII) accounting for 70% of total subscriptions.
- This is attributable to the influx of the private sector with up to nine (9) private insurance companies adopting NIRSAL's innovative index-based agricultural insurance products whereas, agricultural insurance was previously handled mainly by NAIC only given the dearth of viable and innovative products before NIRSAL stepped in.

3. Agricultural Value Chain Development

In the last 5 years, the Abdulhameed-led NIRSAL has excelled at developing and rolling out concepts, agribusiness models and frameworks for upgrading, integrating and fixing Nigeria's broken agricultural value chains following systematic and technology-driven approaches.

- NIRSAL introduced the Agro Geo-Cooperative® concept for structuring farmers with proper governance structures and aggregating their farmlands into contiguous stretches of 250 hectares each.
- So far, 2,743 Agro geo-cooperatives® have been formed by NIRSAL covering 600,000 hectares and over 408,000+ farmers which are being presented to the Central Bank of Nigeria and other financiers for funding of primary production (farming) activities.
- Over 700,000 farmers have been trained by NIRSAL on good agronomic practices and financial literacy.
- Using satellite-based multispectral imaging, Agricultural Commodity Ecological Area (ACEA) mapping of 18 priority commodities have been completed by NIRSAL and validated by research institutes.
- A Mapping to Market (M2M) Strategy has been developed by NIRSAL and is enforced across all supported agricultural transactions to ensure effective linkages to adequate input and output markets.
- 16 innovative agribusiness models have been developed for optimized value chain operations on various agricultural commodities and are being demonstrated by NIRSAL and adopted by the private sector and other actors.

4. Guarantee Portfolio and Project Risk Management

NIRSAL demonstrates risk management acumen and builds trust by developing and deploying robust risk management tools and technologies.

- Abdulhameed's leadership has recovered 88% of all claims paid under the NIRSAL CRG since inception and recovered 51% of legacy ABP loans;
- Despite inheriting a Non-Performing Loan (NPL) portfolio of 7.2% in 2015, which was higher than the industry average at the time, NIRSAL now maintains a less than 1% Non-Performing Loan portfolio, compared to 6% average rate currently obtainable across the banking industry.

This feat is a result of robust credit risk management practices and effective loan recovery strategies introduced by Abdulhameed.

NIRSAL performs comprehensive project monitoring of all supported projects as a critical risk management strategy leveraging its 37 operational Project Monitoring, Reporting and Remediation Offices (PMRO) across the 36 States and the FCT covering 774 local government areas as well as its field ICT monitoring technologies. The NIRSAL PMRO service is subscribed to over 235 agricultural value chain projects and by 15 financial institutions nationwide.

5. Financial Stewardship

Abdulhameed has ensured sustainable growth of NIRSAL's seed capital and efficient application of resources for the delivery of public good to agricultural value chain actors, the economy and society at large.

The following results have been realized due to effective management of financial and risk assets, robust risk management practices and prudent resource management by Aliyu Abdulhameed's leadership,

- Growth in NGN75billion Seed Capital by 75% to NGN131billion as at Q2 2020.
- Growth in Equity by 1,427% from NGN2.5billion Share Capital to NGN38.2billion Shareholder's Fund. Shareholders Equity Ratio grew from 3% at inception to 29% as at Q2 2020.
- 85% improvement in financial leverage evidenced by an improvement in Capital Gearing Ratio from 11.7:1 to 1.8:1.

6. Organizational Development

Building NIRSAL as a successful and sustainable organization that makes great impact has been a key goal for Aliyu Abdulhameed.

- NIRSAL, formerly a project office at the CBN, is now structured into 20 strategic and operational business units for the delivery of its mandate.
- Coming out of the CBN with a team of three (3) core staff, NIRSAL is now fully manned with 255 core staff, 546 project monitoring, reporting and remediation officers nationwide to deliver its corporate objectives.
- NIRSAL now operates from 40 physical offices across all the States of the Federation and the FCT.
- The organisation adopts internationally recognized methodologies and standards tailored to its unique operations as applicable, including the International Financial Reporting Standards (IFRS) for financial reporting; Balanced Scorecard (BSC) Methodology for strategic and performance management; Projects In Controlled Environments (PRINCE2) for project and programme management and benefits realization; and Concept-Plan-Project-Results (CPPR) Framework for results-based management.

7. Impact in Nigeria, Africa and the Globe

Under Abdulhameed's leadership, NIRSAL has made commendable sustainable economic, social and environmental impact in Nigeria and is expanding its influence and outreach to Africa and the globe:

- Estimated NGN510billion worth of economic activity generated;
- 515,000+ Direct Employment created/sustained;
- 3 million+ Nigerian lives positively impacted;
- Promotion of climate-smart agriculture models, enablers and practices;
- Facilitation of climate finance for agricultural value chain actors;
- Discussions with Morocco, Germany, France, etc. on foreign investments and de-risking interests;
- Establishment of a Risk Sharing Facility for the Government of Togo with overtures from Angola, Gabon, Ghana, South Africa, Uganda, Zimbabwe, etc. due to the brand equity already built up by NIRSAL which is a huge pride for Nigeria in the international community.

NIRSAL: 2021 AND BEYOND

The last five (5) years of NIRSAL's journey was one of charting a new course, redefining agriculture through unparalleled thought leadership, and blazing previously uncharted territories in agricultural value chain develop-

ment, financing and risk management. NIRSAL developed numerous innovative concepts, agribusiness models, products, services and ways of doing things that have challenged Nigeria and indeed Africa's status quo in the agriculture and agriculture finance space.

Over the next five (5) years, NIRSAL will ensure full-scale roll out of its models, approaches, concepts, tools, techniques and methodologies, leveraging strategic partnerships to drive exponential growth and create pervasive positive change in the Nigerian economy through agriculture and agribusiness.

What to expect over the next five (5) years:

1. Nationwide implementation of NIRSAL's Agro Geo-Cooperative® model.

NIRSAL will work with partners to structure large expanses of disaggregated farmlands and millions of farmers across States and Local Government Areas of the country. This will entail the application of NIRSAL's Agro Geo-Cooperative® tools, techniques, templates and methodologies for digital field mapping, BVN enrolment and validation, establishment of field governance structures, Agro Geo-Cooperative® onboarding and visualization, etc.

Agro Geo-Cooperative formation will enable smallholder farmers in Nigeria to enjoy the benefits of economies of scale, and unlock access to technology, finance and markets. NIRSAL has a target to structure 4 million hectares, covering 8 million farmers into 16,000 Agro Geo-Cooperatives®.

In addition to the formation of Production Agro Geo-Cooperatives®, NIRSAL will also champion the creation of Input, Processing, Trading and Marketing Geo-Cooperatives® which, when mapped to the Production Agro Geo-Cooperatives®, will deliver a formidable mapped-to-market network of thriving agribusiness SMEs.

2. Scale-up of NIRSAL's innovative agribusiness models across commodity value chains and value chain segments for widespread results

Across the country, NIRSAL will work with strategic partners to replicate its tested and scalable models as Center of Excellence Projects to generate unequalled agricultural productivity and socio-economic developmental outcomes.

Through this, NIRSAL will showcase models that deliver optimized results and guaranteed returns, thereby further promoting rapid adoption of the game-changing models, attracting finance and investments, increasing agricultural and agribusiness productivity, unlocking access to markets, delivering increased food

production, export generation, international trade and job creation.

Some of the models to be scaled up by NIRSAL over the next five (5) years include:

- NIRSAL Climate Smart Irrigation System for Smallholder Agricultural Production (NCIS) powered by Solar
- NIRSAL Climate Smart Irrigation System for Smallholder Agricultural Production (NCIS) powered by Gas
- NIRSAL Primary Production Centers of Excellence (CoE) for optimized yields
- NIRSAL Integrated Commercial Livestock Development Model
- NIRSAL Controlled Environment Agriculture for Urban and Peri-Urban Settings (CEA-UPS) Model
- Solar-Powered Rice Processing Mill
- Wind Energy Turbine Project for Irrigation
- NIRSAL Agro Geo-Cooperative® Management Systems
- Unmanned Aerial Systems (UAS)-driven Field Monitoring Systems (Drone Services) for Field Mapping and Digital Surface Modelling, etc.

3. Nationwide DEAL GENERATION AND PROJECT SOURCING interventions for the expanded flow of finance and investments to more agriculture and agribusiness actors across Nigeria through the NIRSAL Credit Risk Guarantee and other de-risking instruments and products.

NIRSAL will work with relevant actors to maximise idle and latent agricultural structures, identify, re-model, turn around or create agricultural projects for financing and optimised operations through the application of NIRSAL's sustainable agribusiness models, financing frameworks, credit risk guarantee instrument, interest drawback scheme, etc.

NIRSAL will remain guided by the principles of commodity focus by ecological advantage, market driven approach, smallholder inclusion and optimization, and integrated agricultural value chain approach, all layered upon robust de-risking mechanisms to ensure Nigerian agriculture and agribusiness make sustainable progress in the interest of farmers, other value chain actors, stakeholders and the overall economy.

Some of Aliyu Abdulhameed's Activ



Tour of NASENI Solar Energy Ltd during an MOU Signing Ceremony between NIRSAL & NASENI



With Otunba Adeniyi Adebayo, Minister of Industry, Trade & Investment at a Breakfast Session on SATS-C



At an MOU Signing Ceremony between NIRSAL and NIMET



Launch of Royal Exchange's Hybrid Multi-Peril Indemnity Insurance product



With Stanbic IBTC Bank at the premises of LoryB & DP Ventures (beneficiaries of NIRSAL's CRG) in Zaria



At an MOA Signing Ceremony between NIRSAL and World Bank's APPEALS Project in Cross River State

ities over the last 5 years in Pictures



With Mr. Patrick Akinwuntan, Ecobank's CEO at an event marking the Bank's N70B commitment to Agric financing



With the Ooni of Ife and VC of OAU at the launch of NIRSAL's FAMSMART pilot project in Ife



At a Management Strategy Session



In the Vice President's delegation to Germany on a business visit



At an MOU Signing Ceremony between NIRSAL and the German Agribusiness Alliance (GAA) in Abuja



With Prof. Ruth K. Oniang'o at an MOU Signing Ceremony with Sasakawa Africa Association (SAA)

NIRSAL, NASENI Partner on End-To-End Agricultural Mechanization, Climate-Smart Irrigation and Other Agricultural Engineering Solutions



... partnership is a meeting point for NIRSAL and NASENI's respective expertise in agriculture/agribusiness finance and risk management and science & technology, a fusion he predicts will have a profound positive impact on agribusiness in Nigeria.

In continuation of delivering on its mandate of providing end to end solutions aimed at fixing breakages along the Agricultural Value Chains (AVC) in Nigeria, The Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL Plc) is partnering with the National Agency for Science and Engineering Infrastructure (NASENI).

NIRSAL has engaged NASENI as its technical collaborative partner for the conceptualization, design, development, deployment, implementation and execution of various schemes/projects under the NIRSAL-NASENI Comprehensive Tractor Recovery Scheme, the NIRSAL Climate-Smart Modular Geo-Cooperative-Based Irrigation System for Smallholder Farmers and other Agricultural Value Chain related challenges requiring efficient homegrown scientific and engineering solutions for proof of concept projects and for scale-up, to attract finance and investment into fixed Agricultural Value Chains.

As part of the partnership, NIRSAL and NASENI will crowd in stakeholders from all AVC segments to create an AVC-wide commercially viable platform anchored on Public-Private Partnerships (PPPs).

To make up for the deficit in tractors and other mechanization equipment, NIRSAL and NASENI will recover and reinvigorate idle agricultural equipment for enhanced mechanization of agricultural value chains in Nigeria.

In addition to the above, the technological capacity of NASENI in the area of solar modules production, therefore forms a critical backbone in the provision of off-grid energy to power modular irrigation and agro-processing clusters that are domiciled within NIRSAL Agro Geo-Cooperatives® clusters.

Critically, in addition to optimizing the capacity of NASENI, the partnership, like all of NIRSAL's strategic interventions, will create widespread socioeconomic development. Specifically, at least 110,000 jobs will be created, 10,000 direct-



Prof. MS Haruna, Executive Vice Chairman, NASENI, in an armshake with Aliyu Abdulhameed, Managing Director/CEO, NIRSAL PLC at the MOU Signing Ceremony

ly and 100,000, indirectly- another instance of NIRSAL's support of the Federal Government's efforts to achieve economic stability and prosperity for Nigerians.

Speaking at a launch event for the partnership, Aliyu Abdulhameed, NIRSAL's Managing Director/CEO, said that the partnership is a meeting point for NIRSAL and NASENI's respective expertise in agriculture/agribusiness finance and risk management and science & technology, a fusion he predicts will have a profound positive impact on agribusiness in Nigeria.

Restating NIRSAL's commitment to assuring the success of the collaboration, Abdulhameed added that NIRSAL would extend its Credit Risk Guarantee (CRG) cover to finance invested into the scheme; provide Project Monitoring, Reporting and Remediation services; provide technical assistance, capacity building & advisory services and create, provide & facilitate capital market opportunities.

Also speaking, Engr. Prof. MS Haruna, NASENI's Executive Vice Chairman assured that NASENI would "provide cutting edge research and development on innovative approaches for all the schemes and projects under the agreement to advance mechanization, modular irrigation activities and other agricultural engineering solutions across agricultural value chains."

NIRSAL's latest intervention in promoting the adoption of mechanized farming follows the collaborative NIRSAL Comprehensive Agricultural Mechanization Program (NCAMP), developed and deployed in collaboration with Machines and Equipment Corporation Africa (MECA) and NASENI.

Beyond NIRSAL's collaboration with NASENI, NIRSAL's optimized operating system embeds end-to-end mechanization in all of its activities with smallholder farmers nationwide.



Otunba Adeniyi Adebayo, Minister of Industry, Trade and Investment standing in the middle with Aliyu Abdulhameed flanked by some participants at the Breakfast Meeting hosted

In line with its mandate to fix broken agricultural value chains and increase the flow of finance into the sector, the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL Plc) is championing advocacy for the operationalization of a Secured Agricultural Commodity Transport & Storage Corridor (SATS-C) which is expected to combat post-harvest losses, create jobs and boost the contribution of the Agriculture Sector to Nigeria's Gross Domestic Product (GDP).

SATS-C is currently a policy document being prepared for executive consideration by the Federal Ministry of Industry, Trade and Investment (FMITI) who are at the stakeholder identification and engagement stage.

The Ministry hosted a breakfast meeting to which they invited, amongst others, four other federal ministries deemed critical to the successful domestication of the SATS-C initiative. The ministries include those of Agriculture, Finance, Transport and Works. As advocates of an agriculture sector with efficient production, transportation and storage systems, NIRSAL Plc was also represented at the meeting by an executive-level delegation.

During the breakfast meeting, the Honourable Minister of Industry, Trade and Investment, Otunba Adeniyi Adebayo, presented the SATS-C initiative to participants, along with the economic sectors that it would positively impact if adopted and implemented. He stated for the

continued commitment of the sister ministries with related mandates for the successful implementation of the proposed policy document, especially as they prepare to execute a common Client Service Charter that will enforce adherence to agreed rules and standards in a bid to accelerate the project.

There are existing capacities, policies and structures that are complementary to the operational framework of the SATS-C initiative. The stakeholders intend to factor them in as they work on the details of the policy. Some of them include the One-Stop-Shop (OSS) Policy, the Road Crime Control System (RCCS) operated by the Federal Ministry of Transport, and the Agro Ranger Operations under the Nigerian Security and Civil Defence Corps (NSCDC). New initiatives that must be taken on board by the team include Social Engineering of SATS-C ecosystem participants to prepare beneficiaries and users for the SATS-C project and Executive/Legislative Intervention to empower MDAs to expand their mandates and capacity building for stakeholders.

As a key player in the Federal Government's macroeconomic plans, FMITI's work on the SATS-C project is timely. Amongst other things, it will bring a coherent, harmonized tax scheme to bear on Nigeria's agricultural logistics sub-sector which is currently leaking revenue through multiple taxation, extortion and post-harvest losses.



Speaking to journalists after attending the meeting, NIRSAL's Managing Director/CEO, Mr. Aliyu Abdulhameed, enthused that the FMITI's commitment to SATS-C gives him a great sense of hope. He believes that a fully operational SATS-C policy could directly lead to a 5% increase in the agriculture sector's contribution to national GDP by halving annual post-harvest losses of \$12billion. Further benefits, he noted, lie in the lowering of food prices, creation of 125,600 direct and indirect jobs, and the heightened possibility of adhering to standards for improved access to export, industrial and consumer markets.

Recall that at the 55th Annual Bankers Dinner hosted by the Chartered Institute of Bankers of Nigeria (CIBN), the Governor of the Central Bank of Nigeria and Chairman of the Board of Directors of NIRSAL, Mr Godwin Emefiele, challenged banks to optimally harness the huge value-chain opportunities in several sectors of the economy particularly in Agriculture, saying:

"The banking sector, therefore, has a significant role to play as a facilitator of growth in the agriculture sector, through its intermediation function"

"Some of the opportunities in the agriculture sector that banks should explore include ways to address some of the existing gaps in the agriculture value chains, such as storage centres, transport logistics, and technology plat-

forms, that can enable rural farmers to sell their produce directly to the markets.

"These measures would help to improve the productivity of farmers, reduce post-harvest losses, increase access to finance for farmers and improve sourcing of local raw materials for processing by manufacturing and industrial firms"

Abdulhameed hopes that SATS-C would complement and perfect one of NIRSAL's business models/concepts known as the PH-P3 (Primary Production & Harvest, Primary Processing, Primary Transportation and Primary Storage) model which ensures efficient production in the farms and optimum capture of value at harvest by enabling prompt evacuation of produce from farm-gates, and the subsequent haulage of commodities across the country through designated corridors.

SATS-C envisages the implementation of seamless movement of produce from production zones to processing zones to markets, which Abdulhameed believes, would invariably upgrade agro-logistic value chains, flush blockages and usher in an era of increased flow of finance and investments into and through agricultural value chains. For this reason, NIRSAL is reaching out to enabler institutions, driving necessary dialogues and championing advocacy to support the FMITI in the development and implementation of the SATS-C policy in Nigeria.

SENSITIZATION OF FARMERS ON THE BENEFITS OF AGRO GEO-COOPERATIVE®



IKWERRE LGA, RIVERS STATE



MAJE, SULEJA, NIGER STATE



WASE LGA, NASSARWA STATE



KAIAMA LGA, KWARA STATE



SHAGARI, ONDO STATE



KOKONA LGA, NASARAWA STATE

KNOW YOUR FARM (KYF): MEASURING GEOGRAPHIC COORDINATES AND LAND SIZES



IKWO LGA, EBONYI STATE



BOJUDE KWAMI LGA, GOMBE STATE



IKPAYONGO, GWER-EAST LGA, BENUE STATE



IFEDORE, ONDO STATE



KOLOKUMA LGA, BAYELSA STATE



IWAJOWA LGA, OYO STATE

KNOW YOUR NEIGHBOUR (KYN): DETERMINATION OF BOUNDARIES AND ONBOARDING OF MORE FARMERS



OBUBRA LGA, CROSS RIVER STATE



UYO, AKWA IBOM STATE



GUYUK LGA, ADAMAWA STATE



EZIANI COMMUNITY, NSUKKA LGA, ENUGU STATE



AGUATA LGA, ANAMBRA STATE



IBA COMMUNITY, IKWERRE LGA, RIVERS STATE.

KNOW YOUR CUSTOMER (KYC): MEMBERS OF AGCs OBTAINING BVN FOR FINANCIAL INCLUSION



OMOR, AYAMELUM LGA, ANAMBRA STATE



BURUKU, BENUE STATE



BOLORUNDURO, ONDO STATE



IBEJU LEKKI, LAGOS STATE



EKET LGA, AKWA IBOM STATE



IBIONO IBOM LGA, AKWA IBOM STATE

ELECTION OF AGC LEADERS AND FORMATION OF GOVERNANCE STRUCTURES



SHABI VILLAGE, EPE LGA, LAGOS STATE



MAGOTHO, MOWO TOWN, BADAGRY LGA, LAGOS STATE



YENAGOA, BAYELSA STATE



IBIONO IBOM LGA, AKWA IBOM STATE



ZARIA LGA, KADUNA STATE



IKWO LGA, EBONYI STATE



EMIR'S PALACE, GASHAKA, TARABA STATE



KUKAR GADU, FIKA LGA, YOBE STATE

Clearing Nigeria's Route to the Export Market



Export Trade and Economic Development

The persistent instability in the global oil market, which accounts for 87% of Nigeria's export trade revenues, continues to expose the country to adverse market shocks and macroeconomic instability. According to a study by the Central Bank of Nigeria (CBN), diversifying Nigeria's export trade by increasing traded products and trading partners can achieve higher economic stability and economic growth. As such, export trade diversification through the development of key non-oil sectors can play a key role in Nigeria's post-COVID-19 economic recovery efforts.

Agriculture remains a 'low-hanging fruit' with which to diversify and grow Nigeria's export trade as the largest sector, accounting for 30.77% of the nation's GDP, but only 2.02% of Nigeria's total exports in Q3 2020

Exploring the Resilient Agricultural Export Market

Global agricultural exports have more than tripled in value and more than doubled in volume since 1995, reaching US\$1.8 trillion in 2019. According to preliminary data from the World Trade Organisation (WTO), amidst the COVID-19 pandemic, agricultural trade exhibited more resilience than overall merchandise trade which fell sharply in the first half of 2020; while agricultural and food exports increased by 2.5% in Q1 2020. The resilience in global agricultural trade is attributed to several factors, in particular, the essential nature of food and the relative income inelasticity of demand for food. As such, the resilient agricultural export market provides sustainable trade opportunities for countries like Nigeria who seek to diversify export trade as the pandemic lingers.

¹ CBN Journal of Applied Statistics Vol. 9 No. 1 (June 2018) - Macroeconomic Implications of Trade Diversification in Nigeria

² National Bureau of Statistics

³ World Trade Organisation – WTO Data

⁴ Estimates are based on own computations using data from International Trade Centre (ITC) Trade Map and Export Potential Map (2020). For the full set of data that feeds into the analysis of export potential, please refer to <https://exportpotential.intracen.org/en/resources/data/data-sources>.

The existence of the African Continental Free Trade Area (AfCFTA), African Growth and Opportunity Act (AGOA) and other trade agreements provide Nigeria with immense market access opportunities to grow agricultural exports and diversify export trade. Nigeria could maximise already established global export value chains for agricultural commodities, as well as explore

new agricultural export markets, particularly across Africa, based on its comparative advantages.

Efforts must be made to tap into Nigeria's USD950.5million export potential gap on four (4) key agricultural commodities in which the country has established global export trade but still records unmaximized annual export potentials as presented in Table 1.

Table 1: Nigeria's Global Export Potential for four (4) key commodities (Not Exhaustive)

Commodity	Global Imports ⁶ (\$ mn)	African Imports ⁶ (\$ mn)	Nigeria's Export Value (\$ mn)	Export Potential* (\$ mn)	Untapped Export Potential* (\$ mn)	Key Target Markets	Key Competitors
Cocoa, Beans	9,700	37.2	724.6	1,000	275	<ul style="list-style-type: none"> Germany Indonesia Malaysia 	<ul style="list-style-type: none"> Cote d'Ivoire Ghana
Cashew Nuts	3,000	7.3	275.4	663.2	388	<ul style="list-style-type: none"> Vietnam India 	<ul style="list-style-type: none"> Cote d'Ivoire Ghana Tanzania
Sesamum Seeds	3,000	158.7	292.6	553.1	261	<ul style="list-style-type: none"> China Japan 	<ul style="list-style-type: none"> Ethiopia Sudan India
Aquaculture (Frozen Shrimps and Prawns)	18,000	210.7	80.4	106.9	26.5	<ul style="list-style-type: none"> China USA Japan 	<ul style="list-style-type: none"> India Ecuador Indonesia
Estimated Untapped Agricultural Export Potential					950.5		

* "Export potential indicates a hypothetical export value for a given product and target market using an economic model that combines projections of the exporter's supply performance and the target market's demand, forward-looking market access conditions and the bilateral links between countries. The difference between potential and actual exports is referred to as "untapped export potential" - ITC

In addition, Nigeria should target the huge intra-Africa export market that exists for five (5) key agricultural commodities jointly sized at \$8.51billion and for which the country has comparative advantages as the top continental producer as shown in Table 2.

Table 2: Nigeria's Export Potential in Africa for five (5) key commodities (Not Exhaustive)

Commodity	African Imports (\$mn)	Nigeria's 2019 Production Ranking in Africa	Key African Target Markets	Key African Competitors
Cassava	16.2	1	<ul style="list-style-type: none"> Rwanda DRC Uganda 	<ul style="list-style-type: none"> Tanzania Uganda Cameroon

⁵ International Trade Centre – Export Potential Map - <https://exportpotential.intracen.org/en/>

⁶ Global Imports, African Imports and Nigeria's Export Values (2015-2019 average) spooled from the ITC Export Potential Map.

⁷ Average African imports between (2015-2019) spooled from International Trade Centre (ITC)

⁸ Food and Agriculture Organisation (FAO) - FAOSTAT

⁹ Top African Importers (2019) – International Trade Centre

¹⁰ Top African Producer (2019) - Food and Agriculture Organisation (FAO) – FAOSTAT

Yam	1.9	1	<ul style="list-style-type: none"> • S/Africa • Niger • Mali 	<ul style="list-style-type: none"> • Cote d'Ivoire • Ghana • Togo
Maize	4,352	1	<ul style="list-style-type: none"> • Egypt • Algeria • Morocco 	<ul style="list-style-type: none"> • S/Africa • Tanzania • Uganda
Oil Palm	4,139	1	<ul style="list-style-type: none"> • Egypt • Kenya • Tanzania 	<ul style="list-style-type: none"> • Cote d'Ivoire • Ghana • Kenya
Sweet Potatoes	1.9	2	<ul style="list-style-type: none"> • Mauritania • Namibia • Botswana 	<ul style="list-style-type: none"> • Egypt • S/Africa • Mali
African Export Market Size	8,511			

Achieving Export Diversification Through Agriculture

Currently, due to systemic challenges, export value chains for agricultural commodities remain uncompetitive. The efficiency of connection between producers and off-takers remains a major challenge due to issues of quality and standards, inefficient movement of commodities, poor transport and storage infrastructure, inadequate value addition, unstructured aggregation and agro-logistics systems, unharmonized operational and regulatory procedures, et cetera. These issues result in high-postharvest losses, low competitiveness and poor pricing of Nigeria's export commodities and, on multiple occasions, outright rejection of Nigeria's agricultural exports, a situation which has resulted in the establish-

ment of key interventions of Government such as the Zero-Reject Programme.

The value of Nigeria's efforts in scaling up of production of agricultural commodities in line with policy direction and identified local, continental and global market opportunities, can only be realised if Nigeria's export prices compete favourably with other exporting countries.

To realise Nigeria's agricultural export potentials, collaborative efforts must be made to improve on grades and standards, ensure the provision of relevant infrastructure for aggregation, transportation and storage; ease local shipment clearance procedures and improve the general agribusiness trade environment.



Climate Change and Adaptation Initiatives: What it Means to the Smallholder Farmer



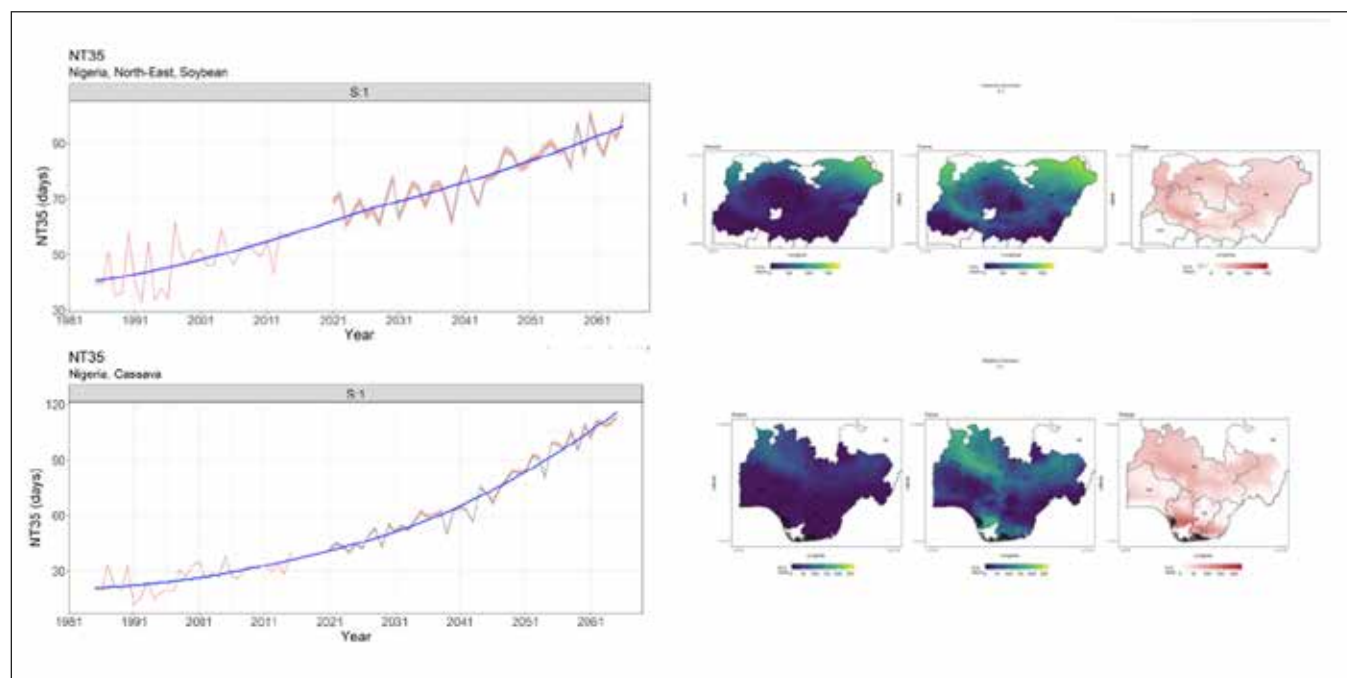
Human activities that are inimical to the environment will inevitably continue, and so will conversations around Climate Change. Greenhouse gases in the atmosphere continue to increase, causing the climate to get warmer and warmer. With rising temperatures come genuine concerns for agricultural productivity. For a nation that is grappling with poor flow of finance into the agriculture sector, any limitations to productivity and project success would further alienate commercial banks from agriculture.

For its mandate to succeed, NIRSAL is constantly developing initiatives and working towards achieving a coordinated response to Climate Change challenges in Nigeria's agricultural value chain. This is necessary for increasing and sustaining the flow of additional fi-

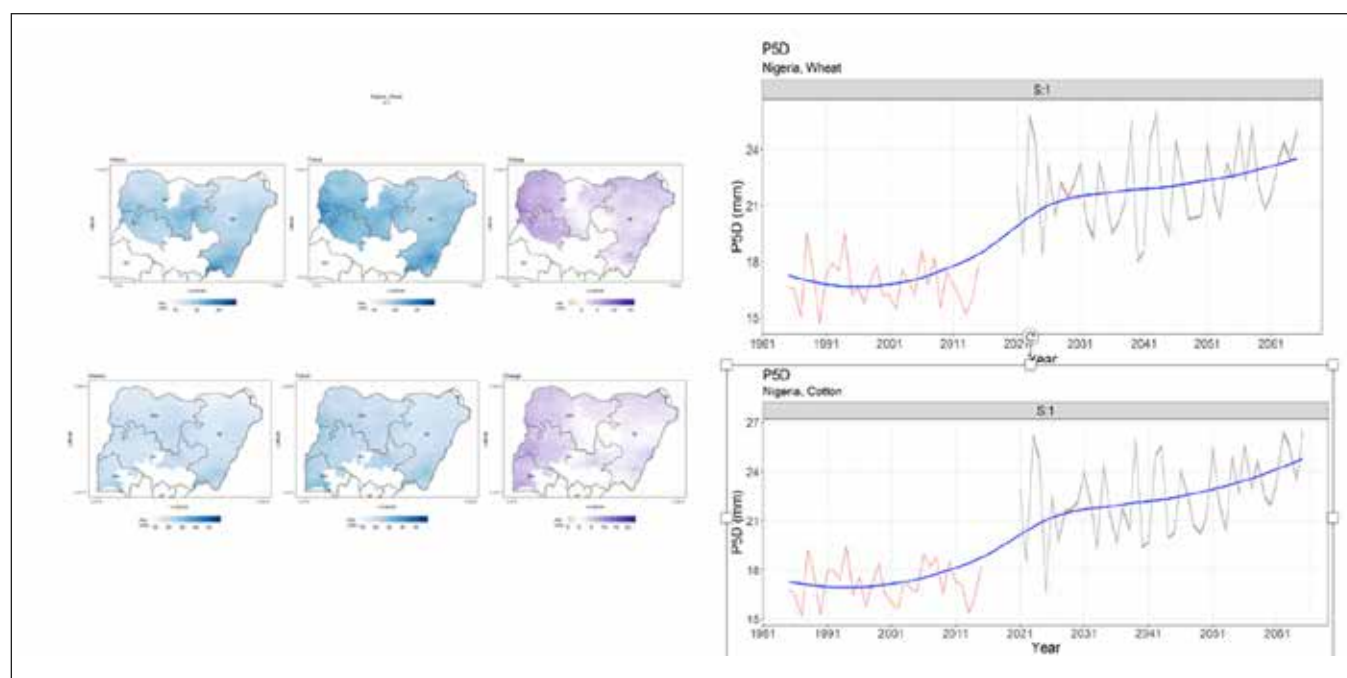
nance into the agricultural value chain. One of such initiatives is an ongoing project with the International Centre for Tropical agriculture (CIAT) for the creation of climate risk profiles for six industrial commodity value chains: Wheat, Cassava, Maize, Soybean, Sesame and Cotton.

As NIRSAL's collaboration with CIAT continues, some key climate risks are already standing out: Drought, Heat Stress, Flood, Dry Spells, Pest Attacks, and Desertification. These risks shorten growing seasons for the identified commodities and impact their entire value chains negatively. Time Series Data and GIS maps for historical data (present and future) between 1981 – 2060 show the impact of climate change and the threats it brings to the pursuit of food security.

Climate Analysis for Heat Stress:



Climate Analysis for Flood Risk:



The chart shows how water stress and heat levels are going to skyrocket if we continue on a business-as-usual path. It is observed that the number of days with temperatures above 35 degrees sharply increases between 2021 and 2061. This will constitute a big problem for agriculture in sub-Saharan Africa if not checked and curtailed with adaptation strategies.

Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change.

It is predicted that by 2050, about 143 million people around the world will become climate migrants. This will become a climate emergency if the right steps are not taken. Some adaptation strategies that are being considered are:

- Significant investment and policies to create and ensure the right environment for agriculture and farmers in the country.
- The mass production of improved seedlings (to combat drought, shorter growing seasons and pest infestation) to enable farmers have multiple planting cycles and reap more economic benefits.
- The use of efficient Climate-Smart irrigation systems to enable multiple cycles.
- The use of high-quality inputs (fertilizers, pesticide etc.)
- The formation of cooperatives to access more support.
- Improvement of public awareness on deforestation and wildfire.
- Introduction of insurance policies to cope with Climate Change challenges.
- The provision of platforms that encourage periodic training of farmers on best agricultural practices to respond to unfavourable climate change.



NIRSAL's Proposition to Sub-National Governments, Donor Agencies



Despite of the optimism of many, there may be no sharp contrast between 2020 and 2021 – at least not in an economic sense. COVID-19 continues to wreak all-round havoc, claiming lives, destabilizing livelihoods and slowing down the government's economic recovery efforts. Some of these efforts have been bold and quite strategic: Through the NIRSAL Microfinance Bank (NMFB), the Central Bank of Nigeria (CBN) has continued to inject liquidity into the real sector to keep it humming. The Ministry of Humanitarian Affairs, on its part, has leapt over the elaborate demands of systemic financial inclusion to take cash directly to rural communities. These efforts have empowered consumers and demand for goods and services are up, thereby instigating production as the economy ambles its way out of recession.

These deployments of stimulus packages by the federal government once again reveal the economic powerlessness of state governments as they look on, merely continuing to 'govern' a people presently harassed by

unprecedented economic challenges, and potentially in the path of a public health catastrophe. Land and labour – two key factors of production – may abound in states, but the capital required to activate them for agricultural production purposes is lacking. These states are hemmed in by unfavourable circumstances: federal allocations continue to dwindle, and commercial lenders have run out of patience with bad borrowers – which some states have been for years. They are not helped much by internal revenue sources either, especially where there have not been substantial infrastructural developments and investments in the first place.

The CBN, with its policies and direct interventions, has been an important stabilizer of the Nigerian economy. However, even its marshalling of commercial banks to be responsive to the needs of the society in which they operate has its limitations. For instance, how much more can they encourage private sector lending to state projects? After many years of ill-advised borrowing, many

states are now over-leveraged to access commercial finance. With federal allocations nearly entirely consumed by recurrent expenditures, the CBN remains the only internal hope of sub-national governments for job creation and infrastructural development. Occasionally, the World Bank or the Africa Development Bank (AfDB) takes an interest, but the burden of economic growth and development rests squarely on domestic shoulders.

It is characteristic of the CBN to first aim for stability in the short-term, and then sustainability in the long. That is what it has done with the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) in relation to the Agriculture Sector. While the apex bank's direct interventions in the sector continue, NIRSAL has put down roots in full pursuit of its mandate of ushering in an era of sustainable agriculture and agribusiness financing in Nigeria. The dynamism of NIRSAL's methods ensure that it can design and structure projects that uphold the aspirations of financiers and borrowers alike. This unique speciality makes the institution a likely get-away vehicle from the economic challenges harassing Nigerian states in the wake of the coronavirus pandemic. But how?

Beyond issuing carefully considered credit guarantees for agricultural projects, NIRSAL offers states a unique deal structuring ability that will help them maximize their vast land and labour resources. Through the creation of Agro Geo-Cooperatives®, NIRSAL helps smallholders to attain size that is attractive to output markets, and structure that is attractive to financiers. Agro Geo-Cooperatives® are a component of NIRSAL's Mapping to Markets (M2M) concept which is a key driver of NIRSAL's operations. Under the concept, NIRSAL has developed the agili-

ty to identify and triangulate market demand, transmit indents to existing production hubs (geo-cooperatives), and facilitate working capital for production to go on, all in one business loop.

States boast the two key inputs that make Agro Geo-Cooperatives®: land and labour. With less than half of Nigeria's 84 million hectares of arable lands currently being cultivated, state governments can unlock new economic vistas for their people by converting green fields to brown. This effort will follow a world-class pattern of de-bushing, levelling, contouring and parcelling out plots in an estate format to smallholder farmers. With land, labour and market indents ready, working capital is almost always guaranteed in the form of microcredits to producers. Such controlled investment environments are the toast of commercial banks, grants providers, and local and foreign donor agencies

Sub-national governments aside, NIRSAL can help donor agencies identify and structure target beneficiaries, especially from the over 3,000 Agro Geo-Cooperatives® that have already been created across the country. NIRSAL's medium-term target of 16,000 Agro Geo-Cooperatives® would house 8,000,000 farmers on 4,000,000 hectares of land. These numbers are being made up by, predominantly, rural populations. By turning swathes of rural bushes and backyards into theatres of production, Nigeria's economic growth and development would be sharper and more impactful. It can all begin with a visit to the NIRSAL Plc website wherein lies a Deal Sourcing portal. Proposals submitted there are studied, analysed, structured and then shared with the growing number of banks who have created substantial agricultural loan portfolios for their study.



NIRSAL's Role in Agricultural Insurance Products Development: a National Food Security Imperative



According to Ayn Rand, a Russian-American writer and philosopher, money demands that you sell, not your weakness to men's stupidity, but your talent to their reason. The business of insurance proceeds from logical deductions by the insured, that, risks, which could devastate his business, can be transferred for a fee. The insurer and the insured both understand the principles upon which the business rests: amongst other things, that the insurer would pool little resources from everyone exposed to a particular risk and, with that, compensate the percentage who actually suffer it; and that the insured may 'lose' money without the risk he feared ever materializing. If both parties have this common understanding, then the business of insurance can go on.

Such understanding and harmony of objectives have been lacking in Nigeria's agricultural insurance space, especially with smallholder farmers who make up 80% of Nigeria's active farming population. Recognizing that uninsured risks could continue to put smallholders out of business year after year, the government created the Nigerian Agricultural Insurance Corporation (NAIC) to provide insurance to farmers. NAIC's emergence solved only a part of the problem: the intangibility of insurance made the full payment of premiums a big ask for smallholder farmers. They simply didn't see the need! The gov-

ernment was to further intervene by pegging premiums at 2.5%, instead of, at least, 5%.

Low premiums and high occurrence of risk events made agricultural insurance unattractive for private insurance underwriters. Low premiums also put re-insurance out of the question! Worse still, once they paid premiums, farmers gave little or no attention to their farms, believing that either of the two possible outcomes they faced – good harvest or claims pay-out – was good enough at the end of the season. This anti-insurance assumption further limited the growth of agricultural insurance, as there was no harmony between the objectives of the insurer and the insured.

The foregoing formed the backdrop of the industry prior to NIRSAL's establishment. As a risk management institution, and one of the logical first measures of risk management being insurance, part of NIRSAL's mandate is targeted at developing innovative products to increase insurance uptake by farmers and participation by private sector insurers. An assessment of the industry by NIRSAL threw up the following findings:

- Only a little over 300,000 smallholder farmers were using insurance in Nigeria,

- Only NAIC was offering agricultural insurance products in Nigeria, and
- The available insurance products were inadequate.

For context, manpower and financial problems limited insurers' ability to inspect thousands of incidences across the country pursuant to the payment of claims. Claims themselves were not always forthcoming given the low premiums pooled and the high volumes of risk events reported. The result was perpetual disaffection between the insurer and the insured, and the unwillingness of conventional, private insurers to enter the market.

NIRSAL's intervention began with the assembly of a consortium of private insurers and NAIC to develop innovative products. The consortium adopted the index insurance approach which is catching on around the globe. The weather index insurance was considered. It benchmarks weather elements like rainfall, which is crucial for crop growth, with the quantities against which historical successes were recorded. If 30mm of rainfall is the historical guarantee for good maize yield in a given location, for instance, it is adopted as the benchmark for that location and that crop. Any shortfall is assessed in the context of what damage it would do to the maize crop and paid for. No need for expensive claim verification missions.

As simple and efficient as the weather index insurance could have been, NIRSAL didn't opt for it. Instead, it was modified to suit the mandate of catalyzing private finance for agriculture and ushering more insurance underwriters into the agrispace. The result was the Area Yield Index Insurance (AYII). Whereas indemnity insurance pays for a farmer's actual loss during the season – which could be insufficient to offset loan obligations incurred, AYII restores his overall objective for the season by compensating for yield shortfalls. In that way, financiers are assured of the safety of their funds, and, insurers, who only have to benchmark historical yields, can comfortably carry on their business.

At the point of developing AYII with the consortium of insurance underwriters, the Central Bank of Nigeria (CBN) had made NIRSAL a Participating Financial Institution (PFI) in the Anchor Borrowers' Programme (ABP). The ABP became the vehicle with which the product was launched to a captive market. Consequently, well over a hundred thousand smallholder farmers used the product under NIRSAL's window. The external uptake is even more encouraging. Private insurance companies have taken up the product and sold to 1.2 million farmers across the country – the exact scenario NIRSAL was set up to create. Hence, with three years' worth of work, NIRSAL is about midway through its ten-year target of increasing insurance uptake amongst farmers to 3.6 million.

Will private insurance companies now take the initiative and develop new products on their own? Royal Exchange

General Insurance Company Limited (REGIC) has already done so by developing the Hybrid Multi-Peril Crop Indemnity-Index Insurance (HM-II) product. However, it needed NIRSAL for testing and marketing. With the CBN's ABP and NIRSAL's Agro Geo-Cooperative® (AGC) model which aggregates and structures smallholder farmers, NIRSAL provides captive markets to sellers of innovative products that can benefit farmers. High product development costs compel companies like REGIC to seek captive markets to enable them to break even quickly before the product is mass produced.

Things are looking up! Through the AGC, a comprehensive field structure for proper extension is coming together. When trained extension agents and AGC leaders become easily available, insurers can commit portions of their revenue to monitoring by proxy, thereby further reducing the occurrence of risk events. The operation of the geo-cooperatives themselves follow the logic of NIRSAL's Agricultural Commodity Ecological Areas (ACEAs). ACEA maps restrict NIRSAL-backed investments in specific commodities to the ecological areas where they grow best. In addition, technologies that can predict the possibility of risk events with high accuracy now exist; farmers, financiers and insurers can get expert advice before planting.

In the context of Nigeria's pursuit of food security, agricultural insurance is indispensable. Though a risk event followed up by prompt claims pay-out does not replace lost food, it preserves production capacities for the future. In the event of insured risks like drought or flood occurring, food security issues for the particular year arise. The government can usually mitigate that from national food reserves. But, without insurance, the problem will grow exponentially in the succeeding years. Therefore, as a matter of national urgency, efforts at educating smallholder farmers on the need for agricultural insurance must be doubled. They need to understand just what insurance is, and what it does. They also need to understand that, for the insured, insurance is not necessarily a business of profits, but of safety.



3,203 Cooperatives, Over Half a Million Farmers join NIRSA's Agro Geo-Cooperative® Model



Members of Uyo Women AGC (Agro Geo-Cooperative®) with their Cassava Offtaker – VON Foods and Farms

The response to Agro Geo-Cooperatives®, the paradigm-shifting concept developed by the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSA Plc) to transform Nigerian agriculture for enhanced and sustainable productivity, is growing further.

According to the latest figures, 3,203 Agro Geo-cooperatives® have been formed by NIRSA under the scheme, covering 600,000 hectares and over 570,000 farmers.

Also, plans to present the cooperatives and farmers to the Central Bank of Nigeria and other financiers for funding of primary production (farming) activities are making significant progress.

The current enthusiasm for the scheme among stakeholders is underscored by the significant improvement of response over time. From an initial 737 in 2018, the number of Agro Geo-Cooperatives® has increased to 3,203; the comparative figures for smallholder farmers is 123,399 to 570,833. Also significant is the increase in the number of field leaders appointed to supervise the Agro Geo-cooperatives® from 2,205 to 9,603.

The ultimate target, according to NIRSA's Managing Director/CEO, Aliyu Abdulhameed, is to create 16,000 Agro Geo-Cooperatives® on 4 million hectares of farmland on which about 8 million farmers across Nigeria empowered with material and financial incentives will produce about 12 million metric tonnes of Grain Product Equivalent (GPE) annually, over the medium to the long term.



It will be recalled that NIRSAL introduced the concept for structuring farmers with proper governance structures and aggregating their farmlands into contiguous stretches of 250 hectares each in 2018.

The Agro Geo-Cooperative® is a unique system that groups adjoining farmlands in geographical areas that have been identified as being suited for specific commodities. It is an improvement on the suboptimal practice of smallholder farming on small, unconnected parcels of land.

Through Agro Geo-Cooperatives®, farmers can have access to structured finance, quality inputs, extension monitoring, weather information, aggregation services, access to markets and other timely support.

Agro Geo-Cooperatives® are also the centre-piece of NIRSAL's Mapping-to-Markets strategy (M2M), an end-to-end approach to agriculture whereby NIRSAL ensures that all segments of agricultural value chains are linked to structured markets.

This is feasible because of the guaranteed trade relationships that would be established between the NIRSAL Agro Geo-Cooperatives® and identified off-takers on one hand and the strategic trade linkages that would feed off the ecosystem for inputs, mechanisation, research technologies, value-added processing, logistics, and of course, finance.



Unmanned Aerial Vehicles (UAVs): NIRSAL Plc's Strategic Tools for De-Risking Agriculture

In the past five decades, climate change, rapid population growth, scarcity of arable land, increasing food prices and diminishing water resources have continued to threaten global food security. To overcome these challenges and ensure 'food for all', modern farming techniques and technologies are being developed to increase food production and also conserve biodiversity and forest resources. These technologies have brought about precision, sustainability and improved yields per hectare in agriculture.

Precision agriculture is a method of farm management that utilizes IT platforms to de-risk agricultural production. The main elements of precision agriculture are an extensive collection of sensors, GPS devices, control systems, robotics, Unmanned Aerial Vehicles (UAVs), autonomous vehicles, GPS-based soil sampling equipment, automated hardware, telematics, and a range of carefully developed software. Approaching agriculture with precision is made all the more important in the context of a global population projected to grow to 9 billion by 2050.

Agriculture is the largest employer of labour in Nigeria; 70% of the population engaged in the sector are responsi-

ble for 22.82% of the country's GDP. Corporate lenders are disinclined to finance the upstream segment of the agricultural value chain due to unavailability of comprehensive farmer and farmland asset data, a reality that has, for far too long, limited what Nigeria's farmers can be and what agriculture can do for Africa's largest economy.

NIRSAL PLC has the mandate of easing access to finance in the agriculture sector by fixing broken value chains and boosting lending and borrowing capacities. Recognizing that continuing agriculture merely as a 'culture' will not deliver food security, job creation, import substitution, and foreign exchange generation that the nation so badly craves, NIRSAL introduced the Agro Geo-Cooperative® (AGC) Model to provide much-needed structure and visibility for the unfettered flow of finance and investments into agricultural value chains.

The beauty of the Agro Geo-Cooperative® model, and indeed of all NIRSAL's innovations is that they are complemented by a host of human and technological resources that optimize their intended value. One of such complementary strategies for de-risking agriculture adopted by



NIRSAL's eBee SQ advanced agriculture drone

NIRSAL is the use of Unmanned Aerial Vehicles (UAVs) which are generally referred to as Drones on the field. A technology adoption pioneered by NIRSAL in Nigeria, UAVs offer invaluable data that support decision making, policy formulation and development of sound agri-business models. The benefits of UAV-acquired data, combined with analytic tools for the interpretation of multi-spectral images into actionable information, help lower risks in agriculture.

The expediency of UAVs to ease spatial data gathering with high degree of accuracy provides a safe, cost-effective monitoring system. Agricultural UAVs provide new vistas for better management of crops and livestock. They furnish farmers with an overview of their crops, permitting them to detect subtle changes that are not promptly recognizable at ground level. UAV or drone photogrammetry is the process of field mapping with the use of drones. It is the acquisition of field characteristics and measurements from high resolution images. Multi-spectral cameras mounted on modern agricultural drones generate images of spectral reflectance band. These are used for crop monitoring and field scouting from calculated vegetative indices.

NIRSAL appreciates the value that UAVs bring to agricultural project management. With its eBee X and eBee SQ UAVs for field mapping and crop monitoring respectively, its medium-term goal of creating 16,000 Agro

Geo-Cooperatives® of 250 hectares is made all the more feasible. In addition, the institution has laid out strategies for nationwide deployment of UAV services across the Agro Geo-Cooperatives®. According to the plan, drone missions would be carried out throughout farming seasons, i.e., land preparation, planting, fertilizer application, irrigation and harvesting, to enable farmers cope with the challenges posed by excessive rainfall at planting or harvesting, drought, pests and diseases, fire and market price volatility.

Specifically, NIRSAL's use of UAVs would focus on:

- Crop monitoring and field scouting
- Natural disaster readiness and response
- Short-term and long-term planning and decision making based on empirical data
- Planning for agriculture support infrastructure.

As preparations continue for the 2021 wet season farming, NIRSAL has deployed its UAV capabilities for field mapping in some AGCs along Numan Road in Adamawa State. A total of 391 hectares were mapped in Boggare, 710 hectares in Sangere, 495 hectares in Geriyo and 683 hectares in Yola. Invaluable data consisting of high resolution and multi-spectral images of the fields were captured, and relevant information on risk factors and possible remedial actions were forwarded to the farmers. This service will be extended to other Agro Geo-Cooperatives® across the country as the seasons come.

NIRSAL Plc Trains, Tasks 1,000 Bank Officers On Improved Agric Lending



As part of continued activities to facilitate the flow of improved, sustainable financing to agriculture, the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL Plc) has trained over 1,000 bank officers on Agricultural Value Chain operations and introduced them to the innovative risk-mitigating products & services that the company offers to provide comfort to financiers.

The trainees, who are made up of Business Development staff from Fidelity Bank Plc, will now have a better comprehension of the different segments of the Agricultural Value Chain and their unique financing needs. Consequently, the exercise will give the trainees an enhanced agribusiness-outlook which will enable them to generate, prepare, disburse and monitor better-quality Agri-loans.

To facilitate the approval of these loans, NIRSAL Plc also familiarized participants with its range of risk-mitigating mechanisms used to protect investors' funds, chief of which is the NIRSAL Credit Risk Guarantee (CRG), an instrument NIRSAL Plc deploys to share up to 75% of agribusiness-related credit risks.

The training exercise conforms with NIRSAL Plc's mandate to address, through innovative risk management, the low funding levels in Nigeria's Agriculture Sector caused by perceived high risks, complex credit assessment processes, high transaction costs and the general neglect of the sector over the years.

To deliver on this charge as obligated by the Central Bank of Nigeria (CBN) which wholly owns NIRSAL Plc, the organisation has since its inception been creating a handshake between Agriculture and Finance through the use of its CRG and project management structure to fix breakages in the Agriculture Value Chain to enable banks to lend to the sector confidently and sustainably.

NIRSAL Plc's seed fund is structured around five pillars including Risk Sharing, Insurance, Rating, Incentives and Technical Assistance. The training exercise for the staff of Fidelity Bank, and indeed other operators in the Finance sector, was carried out leveraging on the latter.

Through its USD60million Technical Assistance pillar, NIRSAL Plc builds the capacity of financiers and Agricultural Value Chain operators on agricultural lending and Good



NIRSAL Plc places the utmost value on its relationship with Fidelity Bank and looking at the future, I can't help but feel a strong sense of optimism that our collaboration will have a major impact on agriculture and agribusiness through the injection of well-structured affordable finance that farmers have lacked for decades

Agronomic Practices respectively. Accordingly, NIRSAL Plc has trained over 2,600 mid-management and Agric desk officers of commercial banks and provided training on GAP to 700,000 farmers.

It is expected that NIRSAL Plc's latest training exercise will result in the generation of pipeline agribusiness deals, disbursement of better-quality agribusiness loans and establishment of lasting business relationships between banks and farmers & agribusinesses in the short, medium and long term respectively.

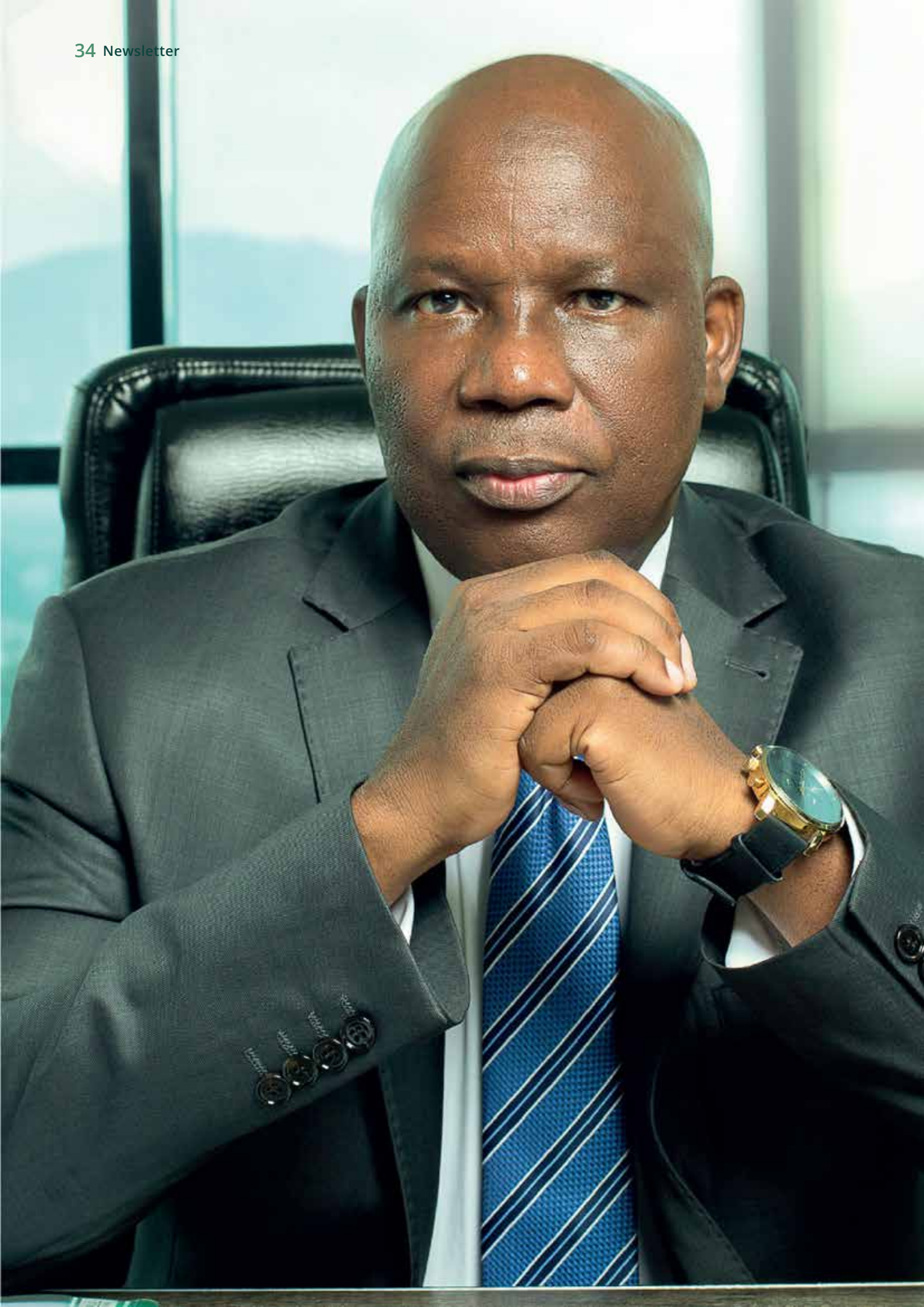
This expectation was emphasized by Aliyu Abdulhameed, NIRSAL Plc's Managing Director/CEO, who, speaking through Michael Adeoye, the Head of NIRSAL Plc's Credit Risk Guarantee Operations & Portfolio Management Business Unit, tasked both the bankers and staff of NIRSAL Plc to establish, foster and maintain relationships geared ultimately at facilitating the much-needed finance agriculture needs to re-position itself as a key economic driver.

Abdulhameed added that "NIRSAL Plc places the utmost value on its relationship with Fidelity Bank and looking

at the future, I can't help but feel a strong sense of optimism that our collaboration will have a major impact on agriculture and agribusiness through the injection of well-structured affordable finance that farmers have lacked for decades."

Also speaking on the exercise, Isaiah O. Ndukwe, Divisional Head, Export and Agriculture for Fidelity Bank thanked NIRSAL Plc for conducting the exercise. He noted that "the training exercise was indeed an eye-opener and has without a doubt improved the knowledge, skills and abilities of Fidelity Bank's staff required for effective job performance.

Stella Nwankwo, a Fidelity Bank staff who participated in the exercise, affirmed that "thanks to the training, I now better understand how each Agric Value Chain segment operates, their inherent risks and what kind of finance each segment needs. Nwankwo added that she now appreciates NIRSAL Plc's efforts in de-risking agriculture and how this was giving bank officers the confidence to pursue agribusiness leads.



NIRSAL Plc CEO Aliyu Abdulhameed Ranked Among Top Global CEOs

Aliyu Abdulhameed, Managing Director and CEO of The Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL Plc), is among the best CEOs in the world according to the UK's CEO Today Magazine, organizers of the annual Global CEO Excellence Awards.

Abdulhameed expressed his sense of pride in leading a dynamic, innovative institution that has brought hitherto local aspects of African agriculture to global reckoning. Also special to Abdulhameed is his role in demonstrating the resilience and determination of Nigeria to rise above her developmental challenges, most of which have been exacerbated by the COVID-19 pandemic.

Abdulhameed has attributed his and NIRSAL Plc's success to the unwavering support of the Board of NIRSAL Plc, effectively led by the Governor of the Central Bank of Nigeria (CBN) and Board Chairman of NIRSAL Plc, Mr. Godwin Emefiele, for NIRSAL and the Agriculture Sector in general.

Abdulhameed is also pleased to have his award draw global attention to the painstaking work being done by President Muhammadu Buhari's administration to effectively diversify Nigeria's economy through the implementation of far-reaching policies that support, first and foremost, agricultural production; then continental trade, digital economy, amongst others. He acknowledged that the support from the federal government and the CBN on the one hand, and the cooperation of players in the financial sector, have contributed immensely to NIRSAL Plc's success to date.

CEO Today identifies and honours the most respected companies and their C-Level executives who lead the way for others on a global stage. In ranking nominees, an international panel of judges sits through multiple stages of judging, including a public voting process; evaluation of the candidates according to a set of precise criteria; and analysis and testing of their achievements and leadership impact. Part of the criteria for this year's awards was the dynamism of the candidates in successfully navigating their organisations through a pandemic that threatened (and continues to threaten) the very life and order of the global economy.

This exhaustive process produced 200 of the best CEOs across the globe, from which figure the most influential were identified, awarded and celebrated.

In its flagship publication, CEO Today highlights NIRSAL Plc's innovations, achievements and plans under Abdulhameed's leadership as exemplary and worthy of recognition.

Under Abdulhameed's leadership, NIRSAL has mapped Agricultural Commodity Ecological Areas (ACEAs) to guide production investments in the Agriculture Sector as the first measure of risk management. Building on that, it created the Agro Geo-Cooperative® model to aggregate scattered farm holdings into contiguous, economically sizeable farmlands and create financial identities for the smallholder farmers thus brought together. This model delivers economies of scale in production, supports integrated and controlled flow of inputs and outputs, and facilitates access to finance and markets. These, together with NIRSAL's systematic linking of all segments of the Agricultural Value Chain through its Mapping to Markets (M2M) strategy, and the development of innovative agricultural insurance products, serve to fix broken value chains while NIRSAL's Credit Risk Guarantee (CRG) facility is deployed to facilitate and de-risk lending to agriculture.

This confluence of strategy and innovation has aided the Abdulhameed-led NIRSAL Plc to facilitate over USD-550million to various actors across Agricultural Value Chains for mechanisation activities, input distribution, and the production, processing, trading and marketing of agricultural commodities.

Abdulhameed stated that NIRSAL facilitated over USD78.8million for agriculture and agribusiness in 2020 alone despite the coronavirus pandemic. Though the alarming spread of the virus in the first and second quarters of 2020 forced governments to shutdown many economic sectors, agriculture-related businesses necessarily had to remain operational. The extensive breadth of NIRSAL's technological capabilities made the transition from onsite to remote working arrangements seamless, limiting confirmed cases of COVID-19 in NIRSAL to 4.3%.

At operational level, staff interactions and workflow switched to virtual, online, customized gadgets pre-designed for remote working conditions. On the project supervision and service delivery levels, NIRSAL's investment in Unmanned Aerial Vehicles (UAVs) paid off. The Abdulhameed-led NIRSAL is a pioneer of the use of UAVs – generally referred to as drones – in Nigerian agriculture. They, along with analytic tools for the interpretation of multispectral images into actionable information, continue to help NIRSAL to lower risks in the field.

According to Mr. Abdulhameed, the most significant indication of NIRSAL's active work during the COVID-19-enforced economic recess is its creation of more than 3,000 Agro Geo-Cooperatives® for over 500,000 smallholder farmers across the country during the period. Indeed, NIRSAL's biggest leap in Agro Geo-Cooperatives® formation was recorded in the second half of 2020 as the organisation continues to pursue a medium-term target of 16,000 Agro Geo-Cooperatives® covering 4 million hectares of land and 8 million smallholder farmers.

In an indication that financiers are growing more and more comfortable in lending to agriculture, Abdulhameed confirmed that various commercial banks and other investors have pledged an additional USD500million to fund agriculture and agribusiness in the short to medium-term, provided that NIRSAL's various mechanisms for securing investments and boosting returns therefrom remain in place. This is coming within the context of ongoing shift in the rate of bank lending to agriculture, from 1.4% pre-NIRSAL to 4.8% as at Q3 2020.

Abdulhameed's award, and the subsequent publication of his excellent leadership nous and NIRSAL's innovations and accomplishments on the CEO Today Magazine, will no doubt inspire governments and private institutions across Africa whose interests have been piqued by the dynamism of Nigeria's NIRSAL and the vast opportunities it facilitates for wealth creation. The magazine's publication is anticipated by over 150,000 CEOs across the globe who rely on it for stimulating experiences and global success stories.



AGRIBUSINESS FINANCE MARKETS

NIRSAL exists to create a handshake between the Agricultural Value Chain and the Financial Sector in order to boost productivity, food security and the profitability of agribusiness in Nigeria.

At the heart of our strategy is the Credit Risk Guarantee (CRG) which enhances the flow of finance and investment into fixed Agricultural Value Chains by serving as a buffer that encourages investors to fund verified bankable projects.

Working with financial institutions, farmer groups, mechanization service providers, logistics providers and other actors in the Value Chain, NIRSAL is changing Nigeria's agricultural landscape and delivering food security, financial inclusion, wealth creation and economic growth.



NIRSAL



**THE NIGERIA INCENTIVE-BASED
RISK SHARING SYSTEM FOR AGRICULTURAL LENDING**

De-Risking Agriculture ■ Facilitating Agribusiness



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