



Vol. 9 no. 1

# FERMA

## Digest

A Publication of Federal Roads Maintenance Agency January 2021

ISSN: 2006-540X



## FUNDING ROAD MAINTENANCE

The Imperative of New Sources

**NASARAWA STATE  
GOVERNOR APPLAUDS  
FERMA**

**FERMA PLEDGES  
COMPLIANCE TO  
SERVICOM PRINCIPLES**

**BAUCHI, NIGER STATE  
GOVERNORS SEEK  
FERMA'S INTERVENTION**

**FERMA PARLEYS WITH  
STAKEHOLDERS ON  
ALTERNATIVE SOURCES  
OF FUNDING**



# Paving Nigeria for its future



**Nuruddeen A. Rafindadi**  
Managing Director

Building roads means empowering people and connecting communities. With over 35,000km of federal highways, the Federal Roads Maintenance Agency (FERMA) is committed to the maintenance and rehabilitation of Nigerian roads to keep the country moving forward with good and safe roads.

With the current administration's emphasis on diversification, our road network is an economic enabler, a catalyst for growth. Improving our roads means that a farmer saves the risk of his goods perishing and the marketer being able to offer a guaranteed price and market for the final consumer. Securing our roads means more jobs, stability and a happier society.

FERMA is committed to efficiency, transparency, and the evolution of our roads network, all to enhance the economic well-being and interest of Nigerians.



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*...For Good, Safe and Friendly Roads*



# FERMA COVID-19/SARS-COV-2/CORONAVIRUS STANDARD OPERATING PROCEDURES (SOP)

## FERMA WORKFORCE COMMUNITY (Work Protocols)

The Agency has a committee on COVID-19 protocols compliance called **Compliance and Implementation Officers on the prevention of COVID-19** charged with the role of enforcing, advise and guidance as regards the prevention and spread of COVID-19 at the Agency.

FERMA's operation/administrative procedures respect all guidelines published by the NCDC including the migration of all its meetings where attendance is more than twenty persons onto ZOOM, MICROSOFT TEAMS, GOOGLE TEAMS and other such available and applicable electronic platforms for minimum physical interaction, as a preventive measure against COVID-19 pandemic.

Official files and other correspondences coming into or leaving the Agency's Headquarters and its offices nationwide, must be decontaminated.

Ensure adequate spacing of workstations and not LESS than 2 meters apart at the Headquarters, Zonal and State offices.

Body temperature shall be taken at all entrances to the Agency premises nationwide. Body temperature above 38°C shall be barred from entry.





**TINKA POINT**  
LIMITED



**ROAD  
EROSION  
CONTROL  
STRUCTURES**





## OUR VISION

**To be the most efficient road maintenance management organisation that will enhance the economic wellbeing of Nigerians and promote their interest locally and internationally.**

## OUR MISSION

**To efficiently administer road maintenance with the objective of keeping all Federal roads in good, safe and friendly condition for best value in road transport**

## OUR VALUES

### OUR PEOPLE

We cherish honesty, unalloyed loyalty and are supportive of one another with strong commitment to individual growth and corporate excellence

### OUR WORK

We are committed to world class service in a timely and accurate manner, using resources responsibly.

### OUR RELATIONSHIP

We value the opinions and ideas of customers as well as those of our stakeholders and readily reciprocate integrity and professionalism

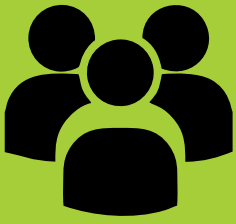
### OUR STRENGTH

We are powered by good leadership, team spirit, reward for accomplishment and employee involvement at all levels.

### OUR ENVIRONMENT

We enjoy teamwork in an exciting, friendly and serene environment.





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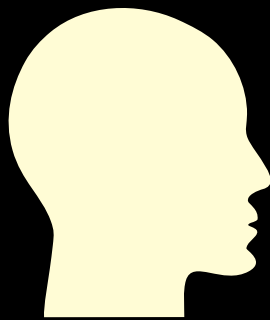
Engr. Nuruddeen A. Rafindadi, FNSE

FERMA DIGEST is published by the Communication and Public Relation Unit of FERMA. 63, Animu Kano Crescent, Wuse II, Abuja. P.M.B. 633, Garki, Abuja.

All correspondence of the Editor news expressed in this publication are those of the individuals authors, and do not reflect the official position of the Federal Road Maintenance Agency (FERMA)

Designed and Printed by  
**CORART VENTURES LIMITED**

Suites C4 & C5 Almaliha Complex,  
2, Michika Street, Area 11, Garki, Abuja.  
DL: 0802 301 0496, 0805 517 8243  
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# WISE SAYING

Compiles by Maryam M. Sanusi (Mrs.)

- 1 "True happiness is not attained through self-gratification, but through fidelity to a worthy purpose" – Helen Keller.
- 2 "He who is not courageous enough to take risks will accomplish nothing in life" – Muhammad Ali.
- 3 "You can't have everything. Where would you put it?" – Steve Wright
- 4 "One of the symptoms of an approaching nervous breakdown is the belief that one's work is terribly important" – Bertrand Russel
- 5 "Failure is not a single, cataclysmic event. You don't fail overnight. Instead, failure is a few errors in judgement, repeated everyday" – Jim Rohn
- 6 "Language is our way of communicating what we want and who we are. By using bad language, we diminish the divine spark within us that defines our humanity" – Laura Schlessinger
- 7 "Any sufficiently advanced technology is indistinguishable from magic" – Arthur C. Clarke
- 8 "By three methods we learn wisdom: first, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest" – Confucius
- 9 "Education is what survives when what has been learnt has been forgotten" – B. F. Skinner
- 10 "Your reputation is in the hands of others. That's what a reputation is. You can't control that. The only thing you can control is your character" – Wayne W. Dyer
- 11 "How we feel is how we want to be heard" – Hugo Von Hofmannsthal
- 12 "Pure love and suspicion cannot dwell together: at the door where the later enters, the former makes its exit" – Alexandre Dumas
- 13 "A love for tradition has never weakened a nation; Indeed it has strengthened a nation in their hour of peril". – Winston Churchill.
- 14 "The greatest lesson in life is to know that even tools are right sometimes" – Winston Churchill
- 15 "Never memorise something that you can look up" – Albert Einstein.
- 16 Cooperation makes things easier, for as the saying goes, "firebrand and firebrand, then the fire burns" – African proverb.
- 17 "Successful people are always looking for opportunities to help others. Unsuccessful people are always asking, what's in it for me?" – Brian Tracy.





## EDITOR IN CHIEF

Maryam M. Sanusi (Mrs.)

# EXPLORING ALTERNATIVE SOURCES

## OF FUNDING FOR ROAD MAINTENANCE IN A PANDEMIC

The COVID-19 disease is upon us with tales of woes from different parts of the world. It has altered revenue projections of various organizations and governments. Budget estimates have been reviewed downwards by many institutions. Major micro and macro economic indicators are in the red as the economy bleeds from the claws of the voracious attack by the monster called CORONA VIRUS. The road sector is one of the unlucky prey.

Nigeria the richest country in Africa has slipped into recession for a second time within a six year period. This is obviously due to the effect of the COVID-19 Pandemic.

It is no longer news that the Government of Nigeria has had a downward review of the 2020 budget occasioned by the fall in crude oil pricing at the international market. The ripple effect is the dwindling of available resources to sustain government activities and invention but particularly posts a huge challenge to the road maintenance sector.

Irrespective of the challenge posed, the Managing Director/CEO of the Federal Roads Maintenance Agency (FERMA), Engr. Nurudden A. Rafindadi, FNSE; has assured that the ravaging effect of the virus will not hamper the performance of the

Agency from fulfilling its mandate. To mitigate against the impact of the pandemic on the Agency's operation, the MD/CEO set up a COVID-19 Compliance and Implementation Committee tasked with the responsibility of creating and implementing procedures and practices as recommended by the World Health Organization (WHO) and Nigeria Center for Disease Control (NCDC) to safe guard staff and visitors against the contraction of the disease.

The big question though, is how far can the impact of the Agency's road maintenance work be felt in the face of paucity of funds considering the enormous financial requirement for road infrastructure? Should one say that the fall in revenue allocation for road maintenance caused by the COVID-19 pandemic has presented another opportunity to advocate for urgent alternatives for funding of road infrastructure across the country?

Road maintenance strategy in developed societies incorporates funds from the private sector to support government efforts. Road is both economic and social services. It is sad to see Nigerians who travel abroad and willingly pay road toll oppose tolling of federal roads.

People do not want to pay tax but want good services as practiced in Europe and North America.

It is an undeniable fact that sole government funding of the sector is apparent. Though it was envisaged in the FERMA ACT (2002) as amended (2007), that the Agency's source of funding would be diverse and as stipulated in the different categories mentioned: "first generation funds which is basically by appropriation; second generation funds by grants and third generation funds by tolls, Public Private Partnership funding models, 5% user charge, etc."; this law of the National Assembly has been observed in breach. All efforts to explore most of these avenues has been futile and met stiff resistance from some quarters.

Legal framework and legislation from parliament must now be vigorously explored to salvage the road networks from further deterioration occasioned by poor funding.

The Federal Roads network is a monumental asset to the nation. As these roads get older, more fund is required to put them back to shape. It is the desire of the agency to get the support of stake holders in this drive for a better funding.





# EXPLORING ALTERNATIVE SOURCES OF FUNDING SUSTAINABLE ROAD INFRASTRUCTURE

Nyihemba, Luper Daniel

## 1.0 OVERVIEW

Roads are critical infrastructure providing mobility which is fundamental to and a key characteristics of economic activity as it satisfies the basic need of moving from one location to another, a fundamental need shared by passengers and freight. It is unquestionable that their development, operation and maintenance enhances the economy,

improves productivity and generates employment. Society benefits from the nation's roads both directly as users and indirectly as consumers of transported goods.

The cost of poor road infrastructure is two folds direct and indirect. Direct cost include hours lost, productivity, vehicle operation cost, loss of freight and even loss of lives amongst others. Indirect cost covers; social impact of

congestions on the society, hours spent by commuters to get to and from work (early departure from home and late arrival back home), fatigue and health issues amongst other impacts.

The development and maintenance of an efficient road network requires a sufficient and sustainable level of funding annually. Considering the decimated government finances arising from the prevailing harsh economic conditions in the country, exclusive reliance on government to fund road infrastructure is no longer an option. This high limitation on the available funds to finance road



infrastructure has necessitated the thinking towards alternative delivery methods anchored on private capital.

## **1.2 NEED FOR ALTERNATIVE MODES OF FUNDING ROAD INFRASTRUCTURE.**

Funding for other economic infrastructure is mainly based on the user pay principle. For example; water is based on consumption, electricity is also based on consumption, sewage is included in utility charges and communication is based on usage. However, road infrastructure doesn't have a direct user based funding mechanism and is traditionally funded in Nigeria using budgetary appropriation. This model of financing is costly, time consuming (considering the layers of bureaucracy and corruption involved) and also negates innovation in the delivery of road infrastructure. The three stage process of Design – Bid – Build or Design – Bid – Maintain is dominated by the project owner/client who drives the process through a series of sequential steps bearing virtually all risk associated with the project. The project requirements are determined by the government (client) who source information from experts either internal/in-house or external sources, and then allocate funds to finance the implementation.

With a current estimate population of about 200 million, road infrastructure delivery using the traditional model is clearly inadequate. The plateauing and sometimes nose-diving government revenues coupled with the social monster of corruption has clearly eroded the government's capacity to deliver road infrastructure. Abandonment of road projects, time over run of projects, occasioned by government's inability to fund such project till completion, and

suboptimal operation and maintenance culture are some of the consequences of the traditional model. Therefore, embracing alternative models for road infrastructure financing is a stitch in time.

Innovative or alternative road infrastructure financing encapsulates concepts that supplements traditional infrastructure funding sources and financing methods, embracing strategies that involves new funding sources, financing mechanism and new financing arrangements in the provision of road infrastructure. Before going into details, there is need to clear the difference between funding and financing of infrastructure. Funding refers to revenue streams or money that pays for an infrastructure project and is derivable from revenue generating sources like taxes, grants (federal and states) and other sources. Financing on the other hand refers to borrowing money to pay for an infrastructure project, typically through bonds, loans, or other debt mechanisms.

Attracting private sector capital as an alternative funding method for road infrastructure is achievable through an improved policy and legal environment that ensure workability of the new methods and give investors' confidence in recouping their investments.

## **1.3 SOURCES AND INSTRUMENTS OF ROAD INFRASTRUCTURE FINANCING**

There are three basic sources of funding road infrastructure namely: Primary sources (user charges/operational revenues), Secondary sources (non-user funding); and tertiary sources (institutional investments).

**1.3.1 PRIMARY SOURCES:** These are derivable during the operational phase of the infrastructure from users and levied for the purchase of specific services (linked closely to the use of the roads).

They include:

**I. Vehicle taxes:** Payments per vehicle on a one-off and on an annual basis. They are variable payments depending on the vehicle characteristics which reflect the cost that each vehicle causes to the roads and/or in the periodic vehicle examination or licensing of the vehicle for road use. Main drawback is that they are not use related. For instance, a truck used for only 5000km per year would pay the same as one travelling 50,000km.

**II. Fuel Taxes:** These are payments applied to the oil and diesel products that are consumed by the vehicles. Fuel taxes are inexpensive to collect, easy to administer and do not however reflect the higher damage done to the roads by heavy vehicles. Although trucks consume more fuel per kilometer than cars and would therefore pay more taxes per kilometers travelled, this is not in proportion to their higher impact on the road. Hence, the need for heavy truck/vehicle charges. Some low income people do not own motor vehicles; however, they pay fuel taxes indirectly because the prices of goods they buy reflect the goods' transportation cost.

**III. Tolls:** They are used on specific roads, and bridges. Charged directly for the use of the facility hence equitable payments are made by the users to the concessionaire who operates a finance initiative. They are

relatively expensive forms of revenue as they have significant capital cost (construction of toll plazas and toll booth, controlled/ and operating costs (toll collection) usually considered for roads with traffic above 10,000 vehicles per day. Other draw backs include deduced economic benefit of the tolled facility by minimizing entry and exit points, delaying traffic at toll booths and diversifying traffic to parallel roads with higher vehicle operating costs.

**IV. Distance Based charges:** These are payments applied strictly to the distance travelled varying with the vehicle features.

**V. Time based charges (vignettes):** Payments are based on the amount of time that the infrastructure is available rather than the distance.

**VI. Fines:** These are charges applied to penalize law violations.

**VII. Green Taxes:** These charges depend on the distance driven and/or the pollutant emission features of the vehicle.

**VIII. International Transit Fees:** These are fees paid on a foreign entering and transiting through another country. Transit charges can be imposed taking into account the transit distance, quality of goods and other aspects.

**IX. Charges on non-standard and overweight vehicles:** This is done to compensate for the extra damage caused to the road by over-sized or over loaded vehicles. In reality, these charges do not reflect the cost imposed on the road by these

vehicles and barely cover administrative costs. They are also easily avoided by payment of bribes. In the case of over loading, a better option would be to enforce axle load limitations through stricter control, fines and forced unloading of contravening trucks.

**X. Charges on the purchase of new vehicles:** This is practiced in some countries like China, and can be graduated for different kinds of vehicles (more for trucks). Similar to annual vehicle registration fees, they are relatively easy to collect, but are not related to subsequent vehicle use.

**XI. Road Pricing:** These charges apply to users within a certain area, so demand can be regulated with these pricing schemes.

**XII. PPPs – Public Private Partnerships:** These are designed to deliver facilities and services that are traditionally procured and delivered by the public sector. Harnessing the expertise and efficiencies of the private sector in developing and operating road infrastructure enables the government to focus primarily on policy, planning and regulation. Commonly used PPP models in the road transport sector are concessions (Design) Build – (Boot), Build – Lease – Transfer (BLT) and, Maintain – Operate – Transfer (MOT) among others.

### 1.3.2 SECONDARY SOURCES

These are also called non-user funding and stems from the following sources:

**I. Provision of ancillary services:** This is derivable from the leasing

of space for services related to transport infrastructure use and includes restaurants, food outlets, stores, parking lots, motels and service station along the alignment.

**II. Third Party Contribution:** This applies to land owners or commercial firm contributions to having a new connecting transport infrastructure and interchange built.

**III. Value Capture:** This comes from the sale of public land or taxing increases on property value that a given project may bring about (that is charging indirect beneficiary as opposed to the direct user.)

### 1.3.3 TERTIARY SOURCES (INSTITUTIONAL INVESTMENTS):

These are derivable from heterogeneous group of investors that populate the global capital markets. They cover “straight forward profit-maximizing joint stock companies” to “Limited Liability Partnerships” (for example private equity firms) to subsidiaries of banks and insurance companies (e.g. mutual funds).

Institutional investors are financial institutions that manage and invest other people's money (except in the case of sovereign wealth funds which can be seen as the state ownership agency for the funds). Sometimes referred to as “intermediary investors” with the following major categorization.

**I. Mutual Funds:** This is an investment vehicle that buys a portfolio of securities selected by a professional investment adviser to meet a specific financial goal or investment objective.

**II. Pension Fund:** A pool of assets forming an independent legal



entity funded by contributions to a pension plan for the exclusive purpose of financial pension plan benefits.

**III. Insurance Companies and Commercial Banks:** These are institutional investors that constitute traditional asset managers.

**IV. Sovereign Wealth Fund:** A state-owned investment fund composed of financial assets such as stocks, bonds, real estates, or other financial instruments funded by foreign exchange assets.

**V. Hedge Funds:** This is an unregulated pool of money managed by investment advisor, who typically has the right to have short positions, to borrow, and to make extensive use of derivatives.

**VI. Private Equity Fund:** A pooled investment vehicle which invests its money in equity securities of companies that are not listed on a public exchange. They are typically limited partnerships with a fixed term of ten years (often with annual extensions). At inception, institutional investors such as pension funds and endowments commit a certain amount of capital to private equity funds, which are administered by the general partner.

**VII. Tax Credit/own a road:** Tax rebate given to enterprises in exchange for building or maintaining a road infrastructure. The own a road aspect is like a corporate social responsibility where the corporate entity picks a road, constructs or maintains it and can either own it by name,

advertisement.

**VIII. Grant Funding:** These are non-repayable funds disbursed by one party and are aimed to strengthen economic and social cohesion by correcting imbalances between different countries or among regions/states.

**IX. Commercial Areas Access Contribution:** Payments imposed to new commercial areas where infrastructure has been developed.

**X. Hybrid Funding:** This is a funding mechanism through subsidized toll roads, partially granted funding or any other combination of funding sources.

**XI. Non-Interest Finance:**

## 1.4 CONCLUSION AND POSSIBILITIES FOR FERMA

With current challenges of reduced revenue and increasing demand for services, exploring alternative modes of both funding and financing road infrastructure are required. Already the Federal Roads Maintenance Agency establishment Act 2002 and the amendment Act 2007-part IV section 14 list the following funding windows among others for the Agency:

- \* Loans and grants –in-aid from Federal, Bilateral and Multilateral Agencies
- \* Rents, fees and other internally generated revenues from services provided by the Agency
- \* All monies collected from toll gates
- \* Such monies accruing from road concessions
- \* 5% user charge on pump price of petrol, diesel and of which 40% will accrue to FERMA and 60% to be utilized by established States roads maintenance Agencies.

- \* International vehicles transit charge as may be determined by the Hon. Minister of Transportation.

It is recommended that the available opportunities enshrined in the act should be looked into, other sources not captured in the act can also be explored through improved policy and legal environment. This will ensure that the new methods work well and also give investors the needed confidence in recouping their investments. Even some of the sources captured in the act such as road concession still require a tolling policy to enable the concessionaire recoup their investment by the user pay method (demand based), the collection of the international vehicle transit charge (IVTC) may not necessarily require tolls at the collection point if service can be synergized with the Nigeria custom service.

Sustainable inflow of funds for road maintenance will not only make Nigerian roads better, it will boost economic activities and eliminate the negative impacts associated with bad roads.

To ensure that the maintained roads don't go bad soon after recovery axle load control measures must be strictly enforced and alternative modes of transportation enhanced to relieve the current overburden on the road network. This will enable the Agency to actualize its task of ensuring that the Federal roads are "Safe and Motor-able" all year round.

## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019

### NORTH CENTRAL



BEFORE



AFTER

NIGER STATE (General Maintenance Repairs of Kontagora - Chifu - Rijau - Kebbi S/B Road, KM. 13+650, Niger State)



BEFORE



AFTER

BENUE STATE (Provision of Road Markings along Makurdi – Nasarawa S/B Road CH.10+000 – CH.22+000, Benue State by Direct Labour)



BEFORE



AFTER

NASARAWA STATE (Direct Labour for Reinstatement of Washout and Construction of Concrete lined drains at CH.9+800 – CH.9+915 along Lafia – Akwanga Road, Nasarawa State)



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



FCT (Pavement Maintenance Works along Abuja-Keffi Road (Section III)



KOGI STATE (Direct Labour Repairs for Patching of Potholes and Repairs of Failed Sections along Itobe-Anyigba Road Between Ch.54+000-Ch.111+600, Kogi State)



KWARA STATE (Major Maintenance Repairs of Share-Patigi-Eggan Kogi State Border Road including Patigi with Spur in Kwara State)



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



BEFORE



AFTER

PLATEAU STATE (Rehabilitation of 60KM Federal Government Road from Kagoro, Manchock (Kaduna State) to Gonawuri/Vom Road, Plateau State)

### NORTH WEST



BEFORE



AFTER

KADUNA STATE (Repairs of Failed Portion of Double Cell Box Culvert and Reinstatement of Embankment Washout at CH. 166+400 (RHS) along Katabu – Pambegua – Saminaka – Plateau S/B Road, Kaduna State)



BEFORE



AFTER

KANO STATE (Major Maintenance Repairs of Kaffin Maiyaki – Tudunwada – Saminaka – Kaduna SB Road, Kano State)



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



SOKOTO STATE (Rehabilitation of Usman Danfodio University Internal Roads, Sokoto State)



ZAMFARA (Emergency Repairs of Washout (By Direct Labour) at KM22+600 Along Gusau-Talata Mafara-Sokoto S/B Road & Construction of Line Drain at KM 16+930 along Gusau – Kaura Namoda Shinkafi Road, Zamfara State)



JIGAWA STATE (Emergency Repair of Washout at CH.161+025 (Malam Madori Township) along Kano S/B – Garki – Gumel – Malamadori - Hadejia Road, Jigawa State By Direct Labour)



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



KEBBI STATE (Special Protective Works along Argungu - Bui Road (Km.6+700, Km7+400 and 29+600), Kebbi State)



KATSINA STATE (Rehabilitation of a Spur with Solar Street Light at KM 42+000 along Daura - Kongolom - Niger Republic Border Road, Katsina State by Direct Labour)

## NORTH EAST



ADAMAWA STATE (Rehabilitation of Yola – Fufore - Gurin Road (Ch.16+250 – Ch.21+475), Adamawa State)



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



BAUCHI STATE (General Maintenance along Kari -Yana Jigawa State Border Road (Km13+500-Km32+700), Bauchi State)



YOBE STATE (Direct Labour Maintenance and Repairs between KM.0+700 – KM.31+700 along Potiskum - Kari - Bauchi S/B Road, Yobe State (Section I))

## SOUTH SOUTH



AKWA IBOM STATE (General Maintenance Repairs of Ekparakwa – Azumini Road (Km15+000 – Km20+000), Akwa Ibom State)



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019

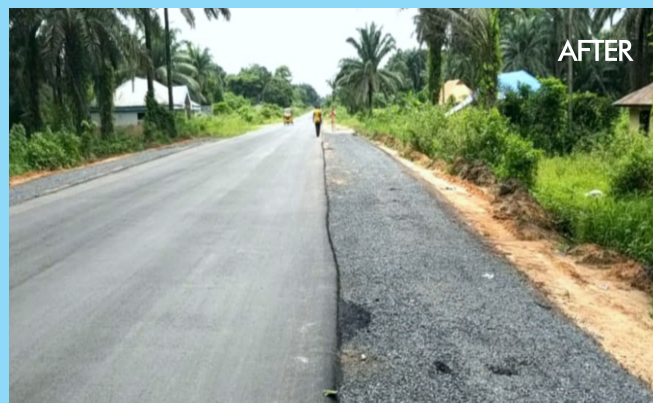


GOMBE STATE (Rehabilitation of Mararraba-Tumu-Futuk-Yalo Road, Gombe State)



### TARABA STATE

Direct Labour Works for Emergency Provision of Reinforced Concrete Line Drain at KM. 30+850 – KM31+130 (Iware) both Sides ( LAT 804913411N Along 110611711E) and Reinstatement of Embankment Washout Extension of Reinforced Concrete Retaining Wall at Tella Bridge KM103+100(LHS) (LAT 80231411N LONG 100301111E) Along Jalingo – Mutum Biyu-Tella Road, Route 90, Taraba State



BORNO STATE (General Maintenance/Repairs of Maiduguri-Dambo-Biu Road, Borno State)



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



BEFORE



AFTER

BAYELSA STATE (Maintenance Repair Works Along Zarama-Okordia-Betterland Road (Km.0+650-Km.5+60) Spur to Patani-Kaima-Mbiama Road (A Section of the East-West Road) Relocated to the Maintenance Repair Works Along Yenagoa-Oloibiri Road Between Km.32+000 and Km.34+000, Bayelsa State by Direct Labour)



BEFORE



AFTER

### CROSS RIVER STATE

Repairs/Rehabilitation of Akpabuya -Bakassi Road (Ch.8+200 – Ch.9+00), Cross River State



BEFORE



AFTER

### RIVERS STATE

General Maintenance Repairs of Ahoada – Abua – Degema (KM 0 + 000 – KM. 45 + 000), Rivers State

## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



DELTA STATE (General Maintenance of Benin - Asaba Dual Carriageway  
CH. 15+000 - CH. 133+000, Delta State)



EDO STATE  
Direct Labour Works along Benin-Ekpoma-Auchi Road, Edo State

## SOUTH EAST



ANAMBRA STATE (Reinstatement of Massive Washout at Km 29+500  
along Oba-Nnewi-Okija Road, Anambra State by Direct Labour)



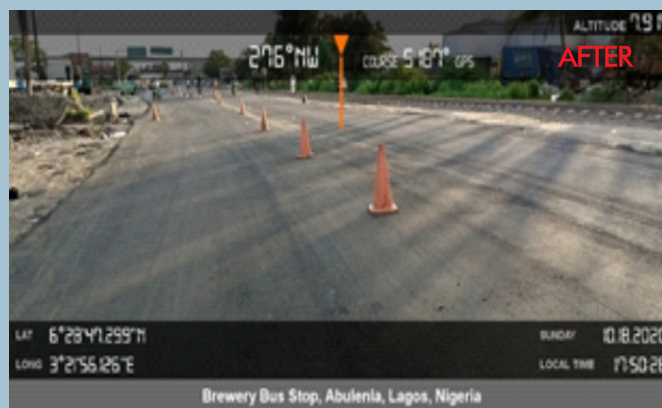
## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



ENUGU STATE  
General Maintenance Repairs of 9th Mile-Oji River (Old Road), Enugu State



IMO STATE (Reinstatement of Failed Sections Between KM. 42+300 –  
KM. 55+250 along Owerri – Okigwe Road, Imo State (Umuna – Okigwe Junction Section)



ABIA STATE (Major Maintenance Repairs of Umuahia – Bende – Ohafia Road, Abia State)



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019

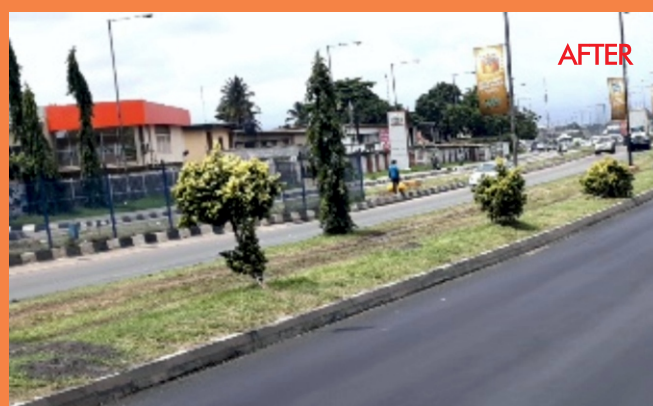


EBONYI STATE (Emergency Repair Works on Abakaliki-Enugu Road  
(Abakaliki Bound) KM. 6 + 150 - KM. 15 + 350, Ebonyi State)

### SOUTH WEST



EKITI STATE (Major Maintenance/Repairs of Omuo – Ifeolukotun – Kogi State B  
order Road, Route No. 554, CH 0+000 - CH 7+500, Ekiti State )



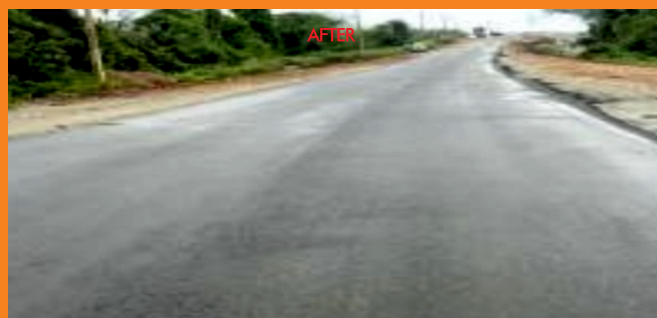
LAGOS STATE (General Maintenance of Western Avenue  
CH. 0+000 – CH. 4+400, Lagos State )



## ACHIEVEMENTS UNDER ENGR. NURUDDEEN A. RAFINDADI BETWEEN 2018 AND 2019



OYO STATE (Patching of Potholes/Repairs of Critically Failed Section Between KM 24+500 - KM 28+500 (Fiditi Area) along Ibadan - Oyo Dual Carriageway (Ibadan Bound), Route 20A, Oyo State)



OGUN STATE (General Maintenance Repairs of Shagamu Interchange - Owode Papalanto Road (CH.0+ 000 - CH.44 + 000), Ogun State. )



ONDO STATE (Maintenance Repair of Akure - Itaogbolu - Iju - Ekiti State Border Road KM.0+000 - KM.4+000) Route No. 30 (F209), Ondo State (Section I) By Direct Labour)



OSUN STATE (Maintenance of Oni II Bridge along Ife - Ifetedo Ondo State Border Road, Route 538, Osun State)





*R-L, MD/CEO, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, with the Transport Consultant, African Development Bank (AfDB), Dr. Abayomi Babalola, during the visit of AfDB Delegation to FERMA*

# AFRICA DEVELOPMENT BANK TO ASSIST **FERMA** WITH LOAN FOR ROAD REPAIRS

**By Aderibole Banwo**

**A**frican Development Bank (AfDB), through its transport sector identification mission, seeks to assist the Federal Roads Maintenance Agency (FERMA) with loan facility to address the funding gap in the road repair efforts of the Agency. This was disclosed when a delegation led by Dr. Abayomi Babalola a transport Specialists/Consultant to the Bank visited the Agency in Abuja.

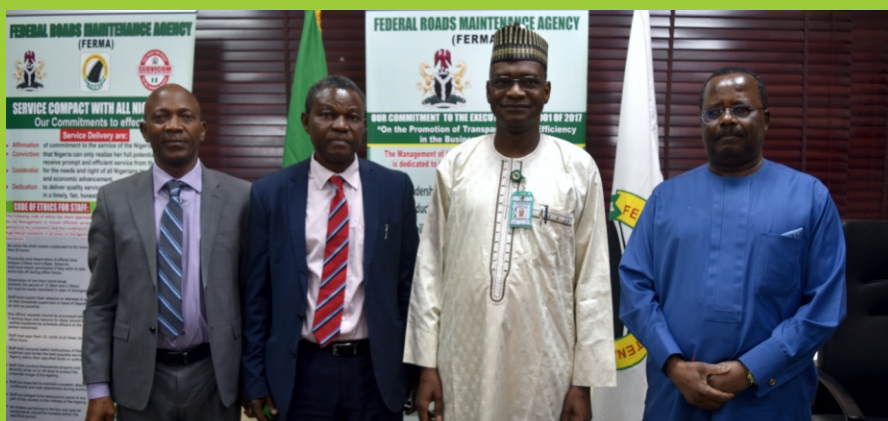
According to Dr. Babalola, the Bank has set aside a total amount of Ten Billion US Dollars (\$10,000,000,000.00) for the Nigerian Infrastructure Development. The loan will be disbursed to different sectors of the economy for a period of 10 years. He however observed that the transport sector had not received much desired intervention from the bank. He informed the management of FERMA that his team was at the Agency on a transport sector identification mission, which consists of identifying road projects in Nigeria that can be funded through a well monitored project circle. According to him, the projects would be of national priority and devoid of political encumbrances. He requested the Agency to forward needs and

projects that meet these criteria, which will eventually be funded by the Bank.

In his response, the Managing Director FERMA, Engr. Nuruddeen A. Rafindadi (FNSE), thanked AfDB for the good gesture, he however bemoaned the poor state of Roads as a result of poor funding. According to him Budgetary Allocation has been grossly inadequate to fund road repair works; Government is looking at other options of funding Road Projects. Engr. Nuruddeen Rafindadi said, when the Ministry of Finance approves the loan arrangement, AfDB should be assured of good execution of the job. Some of

the roads that would benefit from this may not be viable for Privatization, because of low traffic density, but they are important due to their connection to rural areas with heavy Agricultural activities.

The Managing Director of FERMA, assured his guests of a excellent Partnership between FERMA and AfDB in the quest of making Nigerian Roads motorable all year round. Other interventions by the bank on road sector include construction of Nigeria-Cameroon Highway and Ebonyi State ring road Projects.



*R-L, Executive Director, (West Operations) FERMA, Engr. Mujaidu Stanley Dako, MD/CEO, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, the Transport Consultant, African Development Bank (AfDB), Dr. Abayomi Babalola, and the Transport*

# NIGER STATE GOVERNOR

# SEEKS FERMA INTERVENTION ON ROADS MAINTENANCE



**T**he Executive Governor of Niger State, His Excellency, Abubakar Sani Bello has appealed to the Federal Roads Maintenance Agency (FERMA), to look into the deplorable condition of Federal Roads in Niger State with the aim of maintaining them to ease the movement of users, goods and services across the State.

His Excellency made this appeal recently when he visited FERMA Headquarters in Abuja on a courtesy call. He decried the deplorable state of some roads in the State, saying that the users of roads in the State experience tough times in the last rainy season leading to accidents and giving opportunity to bandits to operate without hindrance.

The Governor urged FERMA to as a matter of urgency intervene on Minna-Tegina, Tegina-Kontagora, Jebba-Mokwa, Mokwa- Tegina to make the roads motorable.

The Managing Director/CEO, FERMA, Engr. Nuruddeen Rafindadi, FNSE, in his remarks said he was honoured by the visit of the Governor, adding that the demand to intervene on maintaining and putting Federal roads in the State in good condition for easy movement was valid. He said, "I believe that the roads in Niger State should be of priority because of the importance of the State to the country".

Rafindadi said, "we may not be able to solve all the road problems in the State, but we will identify critical sections and take immediate care of those sections to ease the users movement".

The MD revealed that arrangements has been concluded by the Agency to commence work on some roads in the State under the COVID-19 Intervention projects. He mentioned among others the urgent repairs of Kontagora-Tegina Road, special intervention along Bida-Zungeru Road, General Maintenance Repairs of Mokwa-Kainji Road, Special Repairs of Zungeru – Tegina Road, Special Repairs of Zungeru-Minna section of the Federal road along Zungeru- Minna-Lambatta Road and General Maintenance of Kontagora-Chifu-Rijau- Kebbi S/B in Niger State.

The MD said monitoring and maintenance of Federal roads is the business of FERMA, saying that the Agency will continue to make roads across the country motorable to all road user within the limit of funds that is available to the Agency. He said he appreciated and cherished the cooperation from the State, while hoping for more to help FERMA succeed in its work.

His Excellency, responding to questions from the media said he was very pleased with FERMA because he discovered that all he requested for, has already been planned for and ready to be executed by FERMA shortly. He said, "The MD is doing well, I hope he will be able to get enough funds to work, I am complaining of 2300 kilometers, he has over 36,000 kilometers to worry about, I am glad that he has given Niger State the required attention.



# BAUCHI STATE GOVERNOR CALLS FOR FERMA'S INTERVENTION: PLANS TO ESTABLISH ROAD MAINTENANCE AGENCY

By Maryam M. Sanusi



*L-R, Executive Governor of Bauchi State, His Excellency, Sen. Bala Abdulkadir Mohammed, with the MD/CEO, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, during the Governor's visit to FERMA*

contradiction that there has been very impressive improvement in the maintenance of roads in the State."

Mohammed further said that "The State will not be ungrateful to FERMA as they have benefitted greatly from the tremendous work FERMA is doing on the federal roads that traverses the State."

The Governor added that there were however some challenges which abound in the State because of the inflow of people from the neighbouring States as a result of its peaceful nature. The neighbouring states have in recent years been bedeviled by the activities of Boko Haram and other terrorist activities. This he said, has overwhelmed and overstretched the usage of the road corridors and other social services, which in turn caused a lot of hazards on the roads.

He further highlighted Bauchi-Gombe-Alkaleri road as areas of concern as the Bauchi section of it has not been rehabilitated as against that of other sections of the road. Other sections pointed out, which are also of concern are the Kari-Misau-Yana-Kwanan Huguma road and Yashi-Duguri road.

The Governor craved the indulgence of the Agency to help rehabilitate these roads to ease the difficulty the road users encounter on daily basis. He said, "we are pleading with you to come to our aid, the roads have definitely failed, but even if it has failed, we have to go along with your mandate to maintain it in such a manner that it will be motorable, until the Federal Government gets funds to completely rehabilitate the roads".

In conclusion, the Governor said the State was ready to partner FERMA to tap from the vast knowledge and experience as master of road sector to enable the State to perform well as they intend to establish a State own Road Maintenance Agency.

The Managing Director, Federal Roads Maintenance Agency (FERMA), Engr. Nuruddeen A. Rafindadi (FNSE), has assured the Government and people of Bauchi State of the determination of the Agency to give special attention to the rehabilitation and maintenance of federal roads in Bauchi State, being the gateway of North Eastern States. And to also assist the Governor in his efforts towards the establishment of Bauchi State Road Maintenance Agency.



*Executive Governor of Bauchi State, His Excellency, Sen. Bala Abdulkadir Mohammed (m), flanked to his left by the MD/CEO, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, in a group photograph with his entourage and some FERMA Management Staff during the Governor's visit to FERMA*

The MD made this statement when the Governor of Bauchi State, His Excellency, Sen. Bala Abdulkadir

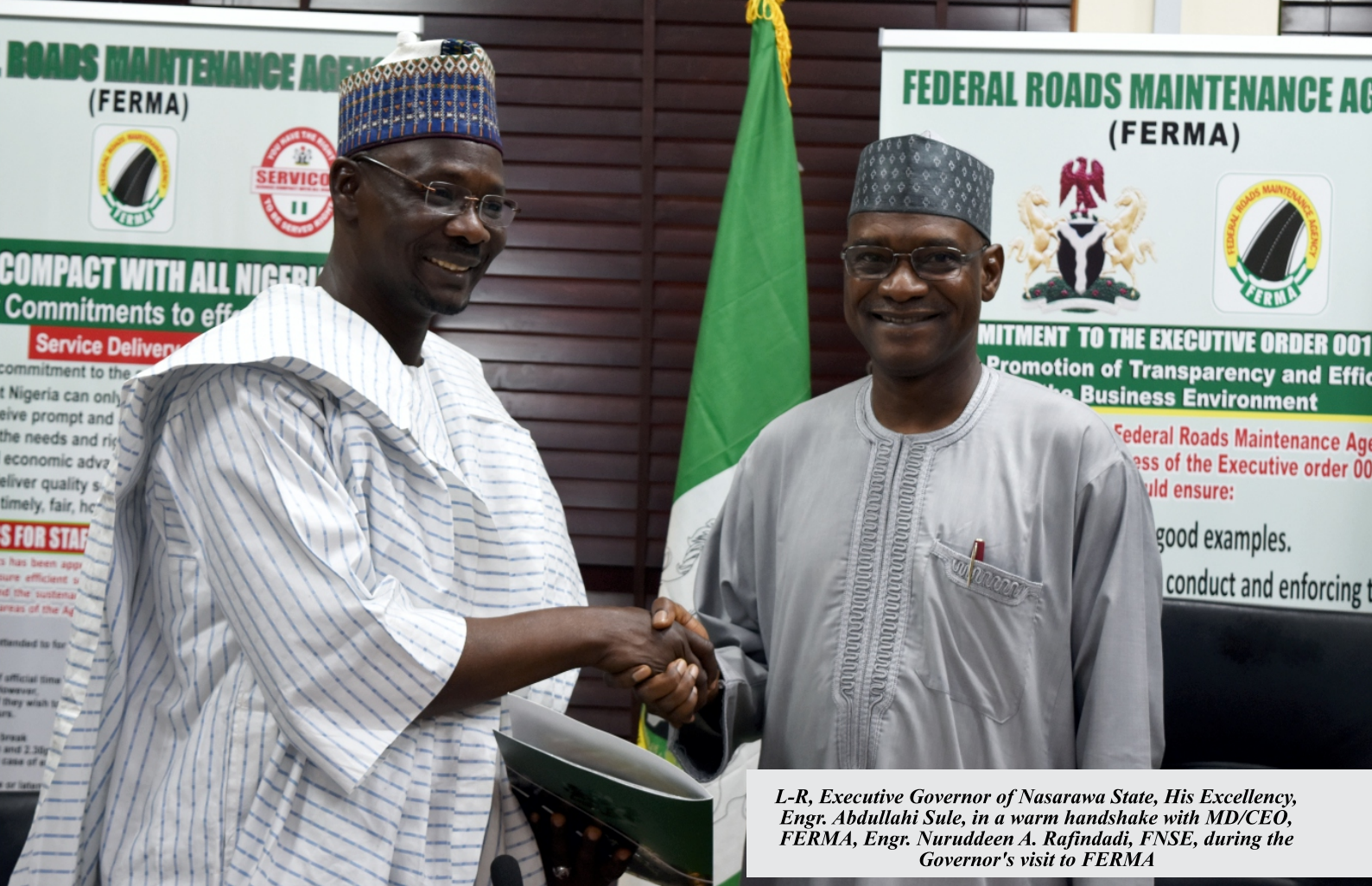
Mohammed and his team called on him in his office, recently at the Agency Headquarters, Abuja.

Rafindadi however lamented the paucity of funds as a factor limiting the concerted efforts the Agency is making to keep federal roads safe and motorable across the nation.

He commended the Governor for his leadership style and for recognizing the giant strides FERMA is taking in Bauchi State, adding that he was humbled by the coming of the Governor and for the excellent remarks made concerning the Agency.

Earlier, The Governor of Bauchi, Sen. Mohammed in his address commended FERMA for the works done so far in Bauchi, saying that there has been improvement on the road sector, both in terms of maintenance and rehabilitation since the Managing Director assumed office. He asserted that "I can say without fear of





*L-R, Executive Governor of Nasarawa State, His Excellency, Engr. Abdullahi Sule, in a warm handshake with MD/CEO, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, during the Governor's visit to FERMA*

## GOVERNOR ABDULLAHI SULE APPLAUDS FERMA FOR MAINTENING ROADS IN NASARAWA STATE

By Maryam M. Sanusi

**T**he Executive Governor of Nasarawa State, Engr. Abdullahi Sule, has applauded Federal Roads Maintenance Agency (FERMA) for the wonderful maintenance works it has done and still doing in Nasarawa State.

The Governor gave this applause when he paid a courtesy call on the Managing Director of FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, in his office in Abuja recently.

His Excellency, the Governor of Nasarawa State said the intervention of FERMA in the maintenance of roads in the State has brought succor to the roads users and has drastically eased the flow of traffic, while improving economic activities.

Engr. Abdullahi said "the purpose of my visit is to thank and appreciate FERMA and to see the faces of the team that has been doing so wonderfully in the

maintenance of roads in Nasarawa State."

Some of the roads where FERMA has intervened include, but not limited to Direct Labour Patching of Potholes and Repairs of Failed Sections Between (CH.0+000 - CH.68+000) along Keffi - Akwanga and (CH.0+000 - CH.32+000) along Akwanga - Andaha - Kaduna S/B Road; Reinstatement of Washout and Construction of Triple Cell Pipe Culvert at CH.2+400 along Keffi - Total Filling Station - Police Station - Inner Roundabout - Old Nasarawa Bye-Pass; Direct Labour Patching of Potholes and Repairs of Failed Sections Between (CH.0+000 - CH.105+000) along Akwanga - Lafia - Benue S/B Road; Direct Labour Reinstatement of Washout and Construction of Concrete Lined Drains at CH.9+800 - CH.9+915 Along Lafia - Akwanga Road.

Others are General Maintenance of Gauta/Nike Road, Keffi; Rehabilitation of Nasarawa Eggon - Mada Station



Access Road; Provision of Road Marking along Akwanga - Andaha - Kaduna S/B Road (CH.0+000 - CH.8+000); General Maintenance and Pavement Strengthening (Overlay) of Lafia - Shendam Road between KM.0+000 - KM.9+900 (Route No. 55); General Maintenance/Pavement Strengthening of Keffi-Gitata-Kaduna S/B Road (CH.0+000-CH.53+000) Route No.346; General Maintenance/Pavement Strengthening along Keffi-Nasarawa Road, Route No. 346; and the General Repairs Between (CH.9+950 - CH.29+000) along Lafia - Shendam - Plateau State Border Road, Route No. 55.

The Managing Director, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, in his response appreciated the Governor and his entourage for deeming it fit to visit FERMA. He said FERMA is the one and

only Agency in Nigeria that is saddled with the responsibility of maintaining Federal Roads in the country.

Rafindadi said maintaining Federal Roads is FERMA's stock-in-trade, and so have we impacted other parts of Nigeria as much as it has impacted Nasarawa State. He added that Nasarawa State is on FERMA priority list as the State houses many workers in Federal Capital Territory.

Encouraging the Governor of Nasarawa State to create a State Road Agency, the MD assures the Governor of the continuous support of FERMA on the great and good works the State Governor is doing, which is adding value to the wellbeing of FCT. He said, 'The importance of a State Road Agency cannot be overemphasized, and FERMA's partnership with the Agency

will impact the people of Nasarawa State favourably in safety, economic and so on. The MD added that the visit of the Governor has further cemented and consolidated the good relationship between Nasarawa State government and FERMA.

The Governor further used the occasion to present an award to the MD/CEO on behalf of the good people of Nasarawa State to appreciate the good work of the Agency in the State.

On the entourage of the Governor were Yakubu Lamai, the Director General, Strategic Communication and Press Affairs, Yusuf Jubril Maianguwa, Senior Special Assistant, Abuja Liaison and the Director Protocol, Ismael Mohammed.



*R-L, MD/CEO, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, decorating the Executive Governor of Nasarawa State, His Excellency, Engr. Abdullahi Sule, with FERMA Lapel pin, during the Governor's visit to FERMA*



**L-R, MD/CEO FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, with the Chairman, Senate Committee on FERMA, Sen. Gershom Bassey, during the Committee's oversight visit to FERMA**

# FERMA

## MD BRIEFS SENATE COMMITTEE ON FUNDING CHALLENGES

By Adache Monday

The Managing Director, FERMA, Engr. Nuruddeen. A. Rafindadi, had in an interactive session with the senate committee on FERMA, recently disclosed that the reason for the briefing was to enunciate the mandate, funding, operations and management of Federal roads in Nigeria. He said it was also to highlight the challenges of FERMA operations and to propose suggestions on

resolving the challenges.

Rafindadi stated that FERMA was established by an Act of National Assembly of 2002 and an amendment of 2007, to monitor and maintain all Federal roads in Nigeria, and to do all the needful to maintain enough presence nationwide in carrying out this mandate.

He disclosed that FERMA operations include routine and periodic maintenance works, major and minor repair works, emergency road repair works, road and route marking, providing road furniture, Direct Labour interventions, construction and maintenance of hydraulic structures and zonal intervention (constituency) projects.

Furthermore, Rafindadi said that the Agency has a number of challenges that have affected the performance of delivering on its mandate. The major one being poor funding which he said is responsible for a lot of intervention not being done. Also, National insecurity across the country, rainy season and poor condition of service were enumerated as challenges the Agency grapples with in the discharge of its mandate.

The MD called on the Senate Committee to come to the aid of FERMA by ensuring that the implementation of the 5% user charge on Petroleum product is effected saying that this will dramatically increase the Agency's capacity to work. He also enjoined them to help in creating a special funding to allow FERMA do projects which are outside FERMA mandate but necessarily requires FERMA intervention to alleviate the pains of the masses.

The Senate Committee members took time to appreciate the efforts of the Agency, and the challenges it is facing, promising to do all within it power to see that FERMA is well funded so as to enable it meet with the mandate for which it was created.

The Senate Committee on FERMA is chaired by Sen. Gershom Bassey with Sen. Abdullahi Kabir Barkiya as the Vice Chairman.

**MD/CEO FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, (M) flanked by the Chairman, Senate Committee on FERMA, Sen. Gershom Bassey, with other committee members and some Management staff of FERMA during the Committee's oversight visit**





# HOUSE COMMITTEE ON FERMA, PLEDGES SUPPORT FOR THE AGENCY

By Iyegun Asubumeh Sunday



**R-L, MD/CEO FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, with the Chairman, House Committee on FERMA, Hon. Femi Bamisile, during the Committee's oversight visit**

Members of the House of Representative Committee on FERMA at a familiarization visit by FERMA at the National Assembly Complex expressed their dissatisfaction on the state of Federal roads across the country.

The Chairman, House Committee on FERMA, Hon. Femi Bamisile, said that the condition of Federal road across the country is very disheartening and very bad as users of the roads now find it difficult to move from one place to the other. He said this has affected the economic activities of the country as movement of goods and services have been impeded.

The Chairman added that kidnappers and armed robbers have thrived recently in their activities as a result of bad spots on Nigerian

roads.

While commending FERMA on the efforts so far put in the maintenance of roads, he said the House is not happy with the state of the roads, and therefore the government must declare a state of emergency on the road sector.

Bamisile further said that the House appreciated the fact that FERMA has not been well funded and as such could not meet its expectation of having its presence felt in every part of the country. He said the Committee will do everything possible to support FERMA to by a way of looking into FERMA's financial constraints so as to help it realize increased annual budgetary approval from the National Assembly.

In the same vein, the chairman said a Meeting of FERMA, House Committee on FERMA and the Governors forum is underway to discuss the release and or the implementation of the 5% user charge on pump price of Petrol which has hitherto not been remitted to FERMA. He said, "FERMA needs intervention financially so as to enable it get to the next level which the present government is driving, the problem of FERMA is that they have enough roads to fix but has limited fund to execute them".

Earlier, the Managing Director, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, in his introductory comment said FERMA was at the National Assembly to meet with the members of the House Committee to interact and brief them on the activities of FERMA.





*Inspection of FERMA Asphalt Plant at Kuje by the House of Representative Committee on FERMA*

The Managing Director said the reason for the briefing was to enunciate the mandate, funding, operations and management of Federal roads in Nigeria. He said it was also to highlight the challenges of FERMA operation and to propose suggestions on resolving the challenges.

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He disclosed that FERMA operations

include routine and periodic maintenance works, major and minor repair works, emergency road repair works, road and route marking, providing road furniture, Direct Labour interventions, construction and maintenance of hydraulic structures and Zonal intervention (constituency) projects.

Furthermore, the MD said that the Agency has a number of challenges that have affected the performance of delivering on its mandate. The major one being poor funding which he said is responsible for a lot of intervention not being done. Also National insecurity across the county, rainy season and poor condition of service were

enumerated as challenges the agency grapples with in the discharge of its mandate.

The MD called on the House Committee to come to the aid of FERMA by ensuring that the implementation of the 5% user charge on petroleum product is effected saying that this will dramatically increase the agency capacity to work. He also enjoin them to help in creating a special funding to allow FERMA do projects which are outside FERMA mandate but necessarily requires FERMA intervention to alleviate the pains of the masses.



*Group Photograph of House Committee on FERMA with FERMA Management Staff during the visit*





*Managing Director/CEO, Engr. Nuruddeen. A. Rafindadi, FNSE, welcoming participants to the FERMA Stakeholders Forum*

# FERMA CONVENES STAKEHOLDERS FORUM TO SEEK OTHER SOURCES OF FUNDING

By Sussan Chukwunwem

In a bid to fulfilling its mandate and to make travelling across the country easier for the road users, the Federal Roads Maintenance Agency (FERMA) convened Stakeholders Forum recently at the International Conference Centre, Abuja to brainstorm and proffer solutions to challenges being encountered by the Agency in the effective discharge of its mandate.

The Managing Director, FERMA, Engr. Nuruddeen. A. Rafindadi, FNSE, in his welcome address at the FERMA Stakeholders forum said, the Federal Roads Maintenance Agency (FERMA)

was established 30<sup>th</sup> November 2002 by the Federal Roads Maintenance Agency (Establishment, etc.) Act 2002, an Act of the National Assembly. The Agency was established for proper monitoring and maintenance of all Federal roads as stated in clause 4 of this enabling Act. It commenced operation in April 2003 saying the establishment was the first official attempt to institutionalize some reform in national road management.

He added that FERMA is charged with the responsibility to monitor and maintain the 30,000 km Federal roads out of about 200,000km in lane kilometres in the National road network with about 35,000km gazetted as Federal roads while State governments is responsible for another 32,000 km, with the remaining 134,000km in the purview of Local Governments.

Rafindadi disclosed that FERMA maintains fully staffed offices in every State of the Federation, each led by a Federal Roads Maintenance Engineer, this, he said was to enable FERMA deliver on its mandate of monitoring and maintaining Federal Roads nationwide. He however said that funding; amongst

other considerations are determinants in the effective productivity of the Agency in delivering on its mandate. He added that his hope was that a number of feasible, but researchable solutions to the teething challenges of the Agency will be proffered during the stakeholders' forum.

In his Keynote address, the Chairman, Governing Board of FERMA, Mr. Tunde Lemo, said Over 80% of travels in Nigeria are carried out on roads; with about 90% of that being largely Federal interstate roads. Thus, Federal roads constitute the spine of the Nigerian road network. To effectively evaluate the productive management of the Nigerian road therefore, one needs only to evaluate the effective management of the Federal roads. With only about 10,000km of Federal roads in 'good' state and about 13,300km and 11,600km in 'fair' and 'bad' states, respectively; it isn't difficult to understand why road density in Nigeria is a paltry 0.21km/sq.km.2.





*The Board, Chairman, Mr. Tunde Lemo, addressing the audience at the FERMA Stakeholders Forum*

Lemo said funding for Nigerian roads is less than 1.0% GDP (against a 3.0% GDP WB minimum spending threshold). He added that at the moment, funding for Nigerian roads has largely been from fiscal allocation through Appropriation Acts, with an increasingly shrinking national budget, and fierce competition for such fund between different sectors and subsector of national economy. It is imperative that the development and management of road sector explore alternative funding sources. He called for an emergency action in the road sector by the government.

Corroborating the position of the Agency, the Chairman, Senate Committee on FERMA, Senator Gershom Bassey, and his counterpart at the House of Representative, Femi Bamisile, also frown at the poor funding of FERMA. Gershom said the Senate expressed serious concern that several thousands of lives had been lost to road accidents due to deplorable state of roads which also serves as safe heaven for hoodlum to operate freely on Nigerian highways. He disclosed that he moved a motion on the floor of the Senate on the deplorable state of Federal highways that are in need of urgent attention, and asking the Federal Government to declare a state of emergency on Federal Roads across the nation. He stated that the Senate Committee on FERMA, Petroleum

Downstream and National Planning have been mandated to investigate the non-remittance of the five percent (5%) user charge on pump price of petrol and international vehicle transit charge

accruing to FERMA. These, he said will serve as alternative source of income that will help FERMA to discharge its duties more effectively and efficiently, thereby bringing relief to road users.



*Cross session of the Panelists at the FERMA Stakeholders Forum*



*Cross session of the Panelists at the FERMA Stakeholders Forum*



*Hajiya Maryam Mohammad Sanusi (Mrs.), Chairman, NIPR FCT Chapter, delivering her acceptance speech*



# FERMA

## SPOKESPERSON BECOMES FCT NIPR CHAIRMAN ALSO BAGS LIFE TIME AWARD

BY Temi Nathan-Elong & Maryam Adamu Umar

**T**he Federal Roads Maintenance Agency (FERMA's) Spokesperson Hajiya Maryam Mohammad Sanusi (Mrs.) has been elected the first Female Chairman of the Nigerian Institute of Public Relations(NIPR) FCT chapter.

The event took place recently during NIPR FCT Chapter's Annual General Meeting (AGM) and Award Night, at the Sheraton Hotel Abuja.

Addressing the media after her inauguration as the 10th chairman of the chapter, Maryam said that the new position was a trust which she intends to manage professionally in the overall interest of the Institute and the profession, she promised to work with all stakeholders and put in extra effort towards placing the chapter on a greater and enviable height.

While handing over, the outgoing Chairman Dr. Tayo Hasstrup was full

of praises to her, because the position according to him, was unopposed giving credit to the fact that her competence and popularity in the chapter is unquestionable. He also said that she is a jinx-breaker as she would be the first woman to hold the position since the branch's inception over two-decades ago.

Hajiya Sanusi also promised to see the numero uno chapter develop in to a world class professional body, able to satisfy all the professional needs of its members as well as the institute, thus conferring on the nation's public relations officers the respect, dignity and recognition they deserve from the government and the society alike.

She emphasized that her emergence as the first female chairman at the flagship chapter after almost three decades (29 yrs) of its existence was a proof that the institute believes in women's

capability to lead, noting that the trust was an honor she would carefully manage for the common good of all.

The chairman assured that she will work closely with relevant government agencies to ensure that the institute enjoys the needed government support, stressing that NIPR is a legal, responsible and reputable entity that could add great value to policies and programmes of government.

The occasion was chaired by Alh. Mohammed Imam Yahaya, OFR. Also in attendance were other prominent individuals like the National President, (NIPR) Mallam Sirajo Mukhtar, Dr. Tayo Hasstrup (Former Chairman NIPR FCT Chapter) as well as a Veteran journalist Maupe Ogun-Yusuf and Yushau Abdulhameed Shuaib, (Publisher, PR Nigeria & Economic Confidential).

Maryam Mohammed Sanusi; Director Information and the spokesperson of Federal Roads Maintenance Agency (FERMA) is well traveled. This is evident in her prowess as an astute communicator and administrator. She is well read and a good team player with a sound professional command in the field of Public Relations. Her emergence as the Chairman of FCT Chapter is very relevant, as the Chapter is the flagship /representative of the NIPR body nationwide.

Other elected officers include; Stanley Ogadigo, Vice chairman, Austin Chijioke, Secretary, Tanyishi





*L-R, the outgoing Chairman, Dr. Tayo Hastrup, with the new Chairman NIPR FCT Chapter, Hajiya Maryam Mohammad Sanusi (Mrs.)*

Ahyenopwa, Assistant Secretary, Inimfom Etuk, Public Relations Officer, Ayodebi Adedoyin, Auditor, Chiamaka Obi-Okafor, Financial Secretary.

Also on the list of elected officers were; James Odey, Treasurer and Tope Ojeme, provost, Tayo Hastrup, Immediate past Chairman as Ex-Officio I, Tahir Muktar, Ex officio II, and Chinwe Ogbuka, Ex officio III.

**T**he Director/ Head Communications & Public Relations Unit, Federal Roads Maintenance Agency (FERMA) and Chairman, Nigerian Institute of Public Relations (NIPR) FCT Chapter, Mrs Maryam M. Sanusi, MNIPR, FIPMD has bagged a "Life Time Achievement Award".

The award was presented to her recently in Abuja during a courtesy visit by Tangale Waja Students Association (TAWASA) in recognition of her selfless and humanitarian service to the Tangale Waja nation, Gombe State and the country at large.

Mrs Sanusi while receiving the award, appreciated the TAWASA team for honouring her with such an award, she said "The reason I was prompted to receive the award was

because you are a young team, thinking vibrantly and coming from home. You are also pursuing a magazine course, which makes us like minds. And coincidentally, I am an Editor in Chief of FERMA's in house magazine "FERMA digest".

She encouraged the team to be hardworking, self reliant and not to relent in their effort, as there was no food for a lazy person. She added that she was happy to be a role model to many young people, stating that when she discharges her duties, she does it genuinely and not for gratification of any sort; but with the expectation that God will keep giving her the necessary wisdom to forge ahead.

The Director, prayed for the young team, she said "may God continue to promote our State (Gombe), zone and locality. I pray for good health, long life and prosperity and success in your future endeavours".

Earlier, the President, TAWASA, Aishatu Akawu stated that the purpose of their visit was to present her with an award for her selfless and humanitarian service to the Tangale nation and to recognize her pivotal role in encouraging education in Gombe State. She added that Mrs Sanusi was one of the inspirational figures chosen by

the Association to feature in their upcoming magazine. She acknowledged that her story and achievements will serve as a source of encouragement to other women out there.

Another official of the Association, described Mrs Sanusi as a role model to a lot of women. Saying "you are a motherly figure, yet strong and a go-getter, your height is a true testament of your struggle, tenacity and intelligence. Your organization is blessed to have someone like you".

Tangale Waja Students Association (TAWASA) was formed in the year 2009 in Gombe State, with the objective of transforming and rehabilitating student and also to aid and probate students in higher education.





# ROAD MAINTENANCE AS A PANACEA TO AVOIDABLE DEATHS

By Iyogun Asobumeh Sunday



**T**raveling by roads is the oldest form of transportation known to mankind. Road transportation evolved from moving on foot and on animals to what we have today with vehicles, that is, cars, trucks, lorries, motorcycles and bicycles. From then on, road transportation has played a very important role in the life of man. Commerce, wars, marriages and other social visitations were carried out through land transportation.

However, despite the enormous resources Nigeria is endowed with, and despite the

fact that Nigeria pride herself as the giant of Africa, it is disheartening to know that the country is not among the list of countries with the best roads in the continent.

Federal Roads Maintenance Agency (FERMA) was established by Act No.7 of 2002 enacted by the National Assembly and assented to by President Olusegun Obasanjo, the agency became Nigeria's first institutional mechanism for monitoring and maintaining all Federal roads in the country.

The Agency was established with the vision

of the agency being the most efficient road maintenance management organization that will enhance the economic wellbeing of Nigerians and promote their interest locally and internationally, and with the mission of efficiently administering road maintenance with the objective of keeping all Federal roads in good, safe and friendly condition for best value in road transport.

In a country where the largest number of its population travel by road especially by motor vehicle, it was considered a step in the right direction even by the strongest critics of the then Obasanjo administration. Its



establishment became a necessity since the government was not capable of giving the whole country the desired quality of road network at any given time. As government tries to fix some roads, others which had been in fairly good shape begin to wear out and lose their strength and substance.

On 15th March, 2004 in its Landmark Operation 500 roads programme (FERMA's first major road maintenance intervention campaign) was flagged off at Tsafa Hill along Jebba-Mokwa road in Niger State. 500 selected Federal roads nationwide with a total length of 12,800 kilometers repaired through direct labour operations and maintenance by rates contracts. This was a remarkable development in the nation considering the high rate of accidents that have been occasioned by bad road network especially during busy festive periods.

Among the commendable strides of the agency was the acquisition of 38 nos. Bergkamp Mobile pothole patching machines to boost the Agency's in-house

capacity to conduct direct labour operations. This was remarkable because it made the issue of bloated contract almost impossible bringing back the days of PWD in Nigeria. It was a cost-effective mechanism that was worth sustaining.

Despite the strong criticism of the quality of maintenance work by certain quality control analyst, the agency's activities reduced the number of deaths occasioned by potholes on our roads.

It is alarming that only about less than half of the entire network of roads in Nigeria can be considered to be in good shape. It is equally shocking to note that 1.0% of our gross domestic product (GDP) is allocated for funding of the nation's road. Little wonder why the cost of transportation of goods from the rural areas to urban cities is such an arduous task and the price so astronomical.

Relevant agencies like FERMA with so important direct effect on the lives of the common man as well as great economic

implications to the nation are grossly underfunded to say the least. Even when there are policies in place for funds to be allocated for running of such agencies, bureaucratic bottle necks are placed on the road such that the allocations are not appropriated until the head of such agencies crawl on his feet begging the authorities as it is the case of the 5% user charge on pump price of petroleum products and international vehicle transit charge. This is akin to taking the money from the pocket of the common man and refusing to utilize same for his benefit and safety.

Sometimes the delay in releasing funds for all year-round maintenance of roads compels the agency to a fire brigade approach especially during Yuletide season and this result in poor quality delivery that cannot stand the test of time.

The bad state of roads across the country has provided tunic for kidnappers and bandits to operate with ease even on highways as vehicles are forced to slow down in trying to maneuver deep gullies on our roads, thereby subjecting the road users to unnecessary hardship.

For the Federal Roads Maintenance Agency to live up to societal expectations, the Government must set aside good amount of money from daily oil sales and proceeds from taxation and non- oil exploration and dedicate same to agencies that are of direct impact to the masses like FERMA.

With the obvious challenge of funding in the agency, the agency has consistently maintain federal roads in every part of the country without giving any section preferential treatment.





# SOIL STABILISATION:

## AN ADOPTED TECHNIQUE BY FERMA FOR ENHANCED MAINTENANCE OPERATIONS

Engr. Dr. Atiku Abubakar Sadiq

### 1. INTRODUCTION

In Engineering, soils are used either as surface earth structure as in dams and embankments, subsurface foundation material or in combination with other materials in the presence of binder to produce cement and asphalt concretes.

It is virtually impossible to execute any civil engineering work without the use of soils. However, not all soils are suitable for engineering purpose. The soils required for engineering works must possess certain qualities to enable it to perform satisfactorily under adverse moisture and stress conditions. The properties are assessed through laboratory tests and the index values for each engineering application are specified in the relevant engineering codes and standards.

In most cases, the soil with the required engineering properties is not readily available near the site of proposed work. Sourcing it from far distant location involves large haulage

distance and hence heavy transport costs. For an economic reason, therefore, the need to modify the local materials encountered at or near the site of proposed work becomes necessary. Hence the advent of soil stabilization.

Soil stabilization means different things in different circumstances. For foundation engineering purposes, soil stabilization is in one of two forms. This can be for the increase in bearing capacity or decrease in permeability of deep foundation such as in dams. It could also involve the improvement of natural soils for the construction of shallow foundations, especially for highways, airfields, parking lots and similar facilities. For the purpose of building construction, stabilization is a technique where natural soil is improved to serve as structural members in low-cost housing construction. To a highway engineer, stabilization is defined as a technique whereby natural soil, gravels and low-

quality aggregate are adopted for use as a civil engineering material in the layers of road pavement. For the purpose of this discussion, the latter definition is adopted.

In Nigeria, the use of soil stabilization technique in highway construction and maintenance is gaining popularity in recent years. In its effort to adopt the technique in its maintenance operations, the Federal Roads Maintenance Agency (FERMA) has recently conducted two field studies involving road base stabilization with Base Seal (BS-100) chemical. Although the objective of the studies was achieved, a poor understanding of science, method and application among the engineering family, is observed. For this reason, an attempt is made to present the basic concept, types and applications of soil stabilization as it relates to highway engineering. Field and laboratory case studies are also presented to enhance the reader's understanding of the subject.

## 2. CONCEPT OF STABILISATION

The inherent property of the soil that is of importance is the shear strength, which is derived from both cohesion and the internal friction characteristics of the material. Cohesion is a property associated mainly with the clay fraction of the soil, which in turn depends on the plasticity index. Internal friction is basically a characteristic of sands and gravels.

Soil can have a wide range of compositions including gravel, sand, clay and silt but the commonly found type on-site are sandy and clayey soils. The sand yields a shear stress-normal stress plot similar to that of the sliding block in [Figure 2-1](#) but the clay gives an intercept on the shear stress axis.

In road engineering, the main objective of soil stabilization is to improve the soil strength, compressibility (volume change) and durability under adverse moisture and stress conditions. The improvement can be obtained either by increasing the cohesive bond or by increasing the normal pressure of the deposit. The pressure can be increased by mechanical means while the cohesive bond is increased by mixing soil with chemicals such as Portland cement, asphalt, lime, base seal etc.

## 3. TYPES OF SOIL STABILIZATION

In practice, the methods by which soils may be stabilized for highway purpose can be divided into mechanical or chemical as highlighted earlier. The two methods are discussed as follows.

### 3.1. MECHANICAL STABILIZATION

This form of stabilization involves compaction and it is by far the most widely used method. It relies, on the inherent properties of the soil material. If the soil cannot be made stable by compaction, then additional soil or other aggregate material may be admixed to produce a mixture having the required stability characteristics. (TRRL, 1977). The addition of particle sizes which are lacking in a poorly graded material produces a better-graded material, which is inherently stronger

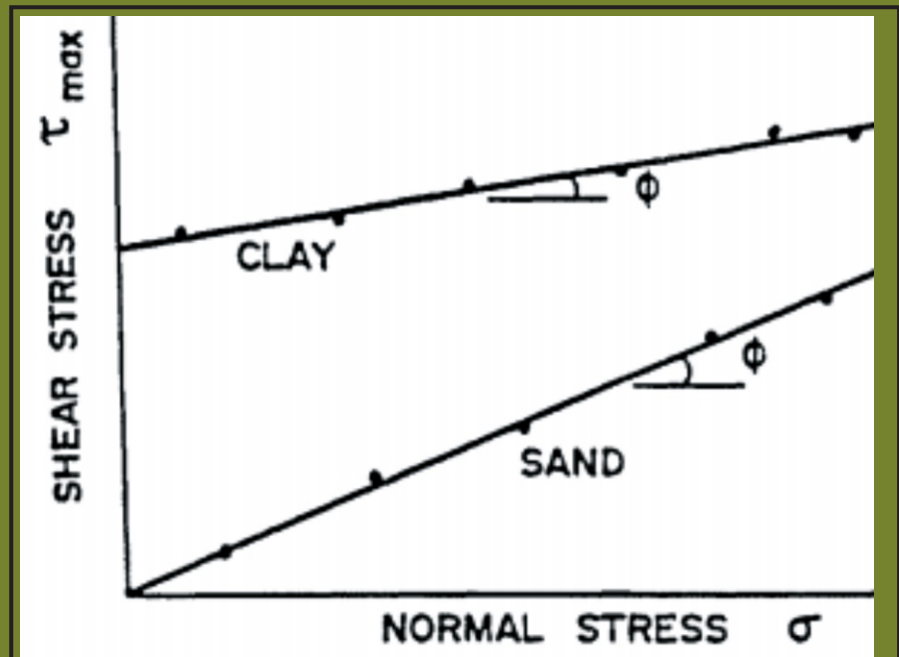


Figure -: Shear Strength envelope  
The equation of a straight line shown in [Figure 2-1](#) is expressed as:  
 $\tau = C + \sigma \tan \phi$

Where:  
 $\tau$ : Shear strength  
 $C$ : Cohesion, Adhesion stress  
 $\phi$ : Friction angle  
 $\sigma$ : Normal stress

and more stable than the natural soil. For illustration, let's consider a study conducted by Sadiq et. al. (2016) where a British mud rock material was mixed with river sand in a systematic approach to produce a material with desired engineering properties similar to that of natural lateritic soil. [Figure 2-2](#) shows the grading curve of the two soils and the produced soil after stabilization. The

grading curve of the resultant soil has compared favorably with that of the natural material as determined by Bello (2011). In this case, mechanical stabilization was used to obtain the desired engineering properties of soil by simply mixing two different soil and application of mechanical energy. It didn't involve the addition of any kind of chemical.

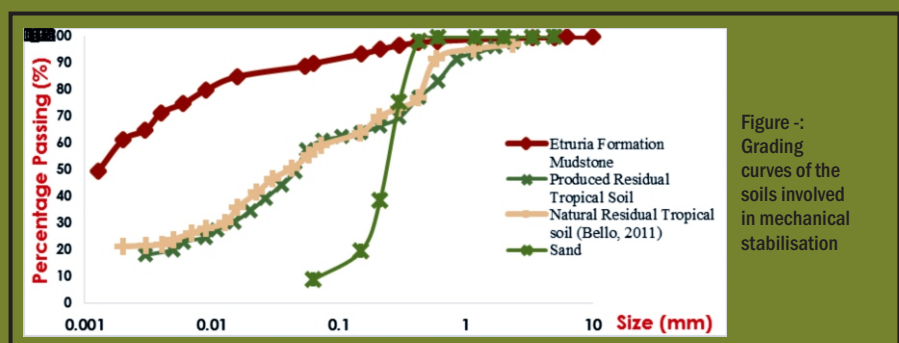


Figure -:  
Grading curves of the soils involved in mechanical stabilisation

Mechanical stabilization using suitable material can be adequate for fills, bases and sub-bases of suitable strength initially, but the ingress of moisture often causes softening and weakening of the pavement. In particular, if excess plastic fines are present, there are also likely to be many variations in the

grading and nature of soil along the line of the road or at borrow pits. Pavement material with collapsible soil can be improved significantly by mechanical method but ingress of water from the surface or wetting up from verges can affect its strength and subsequent weakening its structure. This can lead to



functional and/or structural failures hence the main drawback of mechanical stabilization.

### 3.2. CHEMICAL STABILIZATION

This form of soil stabilization is the improvement of natural materials by the addition of a small proportion, usually about 10 per cent of a stabilization agent. This will, to all intents and purposes, override some minor variations in the soil and ensure that strength is maintained even in the presence of moisture. In most cases, the presence of moisture hardens the soil-stabilizer mixture, hence the stability is preserved. In general, the improvements which can result from stabilization using additives include the following (Toole, 1987):

- i) Increase in strength
- ii) Increased resistance to the effect of water.
- iii) Drying of wet soils
- iv) Volumetric stability
- v) Improved workability
- vi) Improved durability.

Sites peculiarities in terms of geological, geotechnical and environmental conditions need to be studied to determine the appropriate dosage of stabilizers to be applied to get the required properties of the base material properties. As part of the laboratory tests, additive to be used for stabilization need to be varied incrementally in a series of lab tests to determine the optimum content required to stabilize the soil. The basic requirements for successful stabilization are:

- i) The cost of stabilized fill, sub-base or base should compare favorably with other available forms of construction.
- ii) The stabilized soil must be amenable to pulverization, mixing and compaction under field conditions.
- iii) The stabilized material must be

of adequate strength and it should retain this strength in the presence of water.

There are many types of stabilizers but Yoder (1979) categorized the various types according to the properties imparted to the soil. The types of additives used for soil stabilization are:

- i) Cement
- ii) Lime
- iii) Bituminous materials
- iv) Chemicals, Chemicals, other than cement and lime e.g Sodium Silicate, Sodium Chloride, Base Seal, etc.

### 4. ROAD BASE STABILIZATION USING BASE SEAL (BS-100) - FERMA EXPERIENCE

4.1. Base Seal as Chemical Stabilizer  
Base Seal (BS-100) is a liquid chemical, developed to penetrate and create a hard, resilient pavement layer by cementing loose material of the road base into a tight bond.

A study conducted by Gorsha, K. (2018) shows that shrinkage cracks are significantly minimized and strength generally increased with the addition of Base Seal product, thereby reducing future maintenance costs. Strength and durability can be improved using as little as three (3) per cent cement with Base Seal for a variety of soil types. Apart from its satisfactory Engineering performance, BS-100 has the following advantages over other chemical methods.

- It contains a revolutionary cohesive agent that forces a tighter bond of soil while preventing adhesion of the material to grader blades and rollers.
- It is cost-effective compared to other chemicals and has a long-term economic benefit when used with some additive e.g. cement, Cement Kiln Dust (CKD), Lime Kiln Dust (LKD), etc.

- It is easy to use. Simply diluted to its proper strength in a water truck and applied as directed.
- It is environmentally friendly and chemically safe.
- When paving after application, it is suggested that 24 to 72 hours curing time be allowed to obtain maximum cementation.
- It is environmentally friendly and chemically safe.

Above and many more advantages makes Base Seal (BS-100) attractive to many of its clients including FERMA.

### 4.2. SITE DESCRIPTION AND PROJECT OBJECTIVE

Ayetoro-Mopa-Isanlu-Ijeba-Kwara S/B road in Kogi state is one of the federal highways that are in terribly bad condition. The road has deep/large potholes and critically failed section with exposed base and subbase layers at most locations. Considering the deplorable condition and varied base material, FERMA has selected this road for a pilot study on the use of base-seal for road base stabilization. In this study cement and base-seal (BS) admixture was used to improve the base course properties using chemical stabilization method. The objective of the project is to determine the suitability of BS-100 stabilizer in improving the engineering properties of deficient and existing pavement material. The project is second in the series projects embarked by FERMA aimed at achieving the above objective. The first among the series is a project executed by contract in Borno state.

### 4.3. PROCEDURE AND RESULTS PRESENTATION

A joint reconnaissance survey was first carried out to identify and select the most appropriate failed sections to be stabilized. The information gathered during this survey provided some inputs for planning. It also enabled samples to be collected for laboratory tests. The objective of the laboratory study was to determine the soil properties at its natural state and its response to stabilization with cement/base-seal

admixture. The tests were carried out in the FERMA zonal laboratory at Gwagwalada, Abuja. After testing the natural soil, it was admixed with cement and base-seal solution and tested again. The test results of classification tests are summarized in Table 4-1 and include the precise locations indicated by test points (TPs), Waypoints (WPs) and coordinates of samples obtained for each section. While the compaction and CBR tests are shown in Table 4-2.

**Table 4-1: Summary results of Laboratory Classification Tests**

SECTION	TEST POINT (TP)	WAY POINT (WP)	COORDINATES	Sieve analysis			ATTERBERG LIMITS		AASHTO MATERIAL CLASS
				No 7 (%)	No 40 (%)	No 200 (%)	LL (%)	PI (%)	
1	TP 01	153	N: 07° 59' 54.0" E: 005° 59' 18.3"	82	46	14	NP	NP	A – 2 – 4
2	TP 02	155	N: 07° 57' 06.9" E: 005° 59' 21.7"	71	52	36	33	12	A – 2 – 6
	TP 03	156	N: 07° 59' 04.0" E: 005° 59' 22.0"	73	35	18	25	8	A – 2 – 4
	TP 01	150	N: 08° 01' 23.5" E: 005° 57' 47.5"	75	29	14	NP	NP	A – 2 – 4
3	TP 01	140	N: 08° 02' 49.2" E: 005° 56' 43.3"	78	58	33	35	15	A – 2 – 6
	TP 02	143	N: 08° 02' 47.9" E: 005° 56' 44.9"	75	39	19	28	9	A – 2 – 4
	TP 03	147	N: 08° 02' 07.0" E: 005° 57' 16.1"	67	41	17	NP	NP	A – 2 – 4
4	TP 04	146	N: 08° 02' 05.2" E: 005° 57' 17.1"	64	42	19	NP	NP	A – 2 – 4
	TP 01	137	N: 08° 03' 34.0" E: 005° 55' 53.7"	59	46	31	39	13	A – 2 – 6
	TP 02	138	N: 08° 03' 32.9" E: 005° 55' 55.4"	74	53	33	22	7	A – 2 – 4
5	TP 01	135	N: 08° 04' 51.5" E: 005° 54' 04.8"	84	46	27	33	15	A – 2 – 6
	TP 02	136	N: 08° 04' 49.5" E: 005° 54' 05.7"	61	49	32	27	9	A – 2 – 4

**Table 4-2: Summary results of Compaction and CBR Tests**

AASHTO CLASS	COMPACTION		UNSOAKED  CBR  (%)	ADMIXED CBR (%)		
	OMC  (%)	MDD  g/cm³		CURING PERIODs		
				24hrs	72hrs	168hrs
A – 2 – 4	7.8	2.03	78	105	115	187
A – 2 – 6	9.8	1.99	61	101	110	181

Adequate information about the site condition was gathered during the site condition survey and data about the base condition was obtained during laboratory studies. These two exercises have prepared the project team to commence site work well informed. The site works began with a survey of the existing road and subsequent design for earthworks. Road design using survey data provided a guide for cut and fill operations as well as in obtaining the appropriate horizontal and vertical alignments of each section stabilized.

Each section was scarified, cut and filled as appropriate, then compacted to the designed levels before the commencement of stabilization.

The procedure for the stabilization involved mixing the soil with 2.5% cement and BS solution. The solution was prepared by mixing BS-100 chemical with a calculated quantity of water at 1:38 ratio BS-100/OMC ratio. The mixture was mixed thoroughly and sprayed evenly on the surface of the prepared base, at a calculated rate of

spray. In the absence of pulverizer, a grader was used to mix the soil with the additives. Finally, the soil was shaped and compacted to obtain the designed profile. For monitoring and control purposes, relative density test was carried out on site. The result of the relative density test is shown in Table 4-3.



**Table 4-3: Relative Density Test Results**

Date of the Test	31/08/19		1/9/2019		9/10/2019		9/12/2019		13/9/2019				
Test Location	Section 1		Section 2		Section 4		Section 5		Section 3A		Section 3B		
	R	L	R	L	L	C	R	R	L	R	L	B	L
Sand bulk density		1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Sand in cone	399	399	399	399	399	399	399	399	399	399	399	399	399
Wet soil from hole	2423	2423	2464	2343	2330	2417	2066	2400	2292	2271	2209	2409	2519
Sand before pouring	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Sand after pouring	1096	1096	1120	1000	1150	1158	1200	1096	1154	1145	1166	1173	1062
Sand hole + cone	1904	1904	1880	2000	1850	1842	1794	1904	1846	1855	1834	1828	1938
Sand in hole	1565	1565	1481	1601	1511	1443	1396	1505	1507	1456	1435	1429	1538
Wet density	2059	2059	2213	1946	2051	2228	1968	2121	2023	2074	2047	2242	2178
Moisture content (%)	8.4	8.4	10.2	13	10	9.2	13.1	13.5	13	9	9.7	9.5	6.9
Dry density (Kg/M3)	1899	1899	2008	1722	1865	2040	1742	1867	1790	1903	1866	2048	2038
MDD/labor no	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Relative density (%)	95	95	100	86.1	93.3	102	87.1	93.4	89.5	95.2	93.3	102	102

Among the challenges encountered on site, includes frequent disruption of work by the rainfall being at the peak of the rainy season. Non-availability of pulverizer which necessitates using a grader for mixing on site was also another challenge. Some tools and equipment required for insitu strength-testing equipment were also not available.

#### 4.4. DISCUSSION OF THE RESULTS

The laboratory and site studies results are presented and discussed in this section.

##### 4.4.1. LAB STUDIES RESULTS

Table 1 shows the percentage passing through sieve No. 7, 40 and 200 for each soil samples obtained at each section. It also presents the LL and PI of the samples obtained at various points along the route.

Generally speaking, the classification tests conducted as explained above confirmed that soil Samples (TP1 – TP12) obtained from the five (5) selected sections along the route under study are of different types. When the AASHTO classification system was applied the various samples fall under two groups A-2-4 and A-2-6.

The compaction test conducted on the two identified soil groups gave OMCs of

7.8% and 9.8% for A-2-4 and A-2-6 types, respectively. Their corresponding MDDs are 2.030 and 1.988, respectively. For the CBR test, the result for the test on natural soil, the values obtained for the two types of soil are 61% and 78% for A-2-4 and A-2-6, respectively. These values do not satisfy the requirement of Nigerian General Specifications for Road and Bridges (1997) and are probably the cause of the road failures. Additionally, research on laterite has confirmed that 80% is required for base course and 20% to 30% for sub-base causes (Gidigas, 1980; Gidigas, 1982; Osinubi, 2001).

When stabilized with Base-Seal/cement admixture, the result shows an increase in CBR values for A-2-4 from 61 to 115 over 7 days while that of A-2-6 increased from 78 – 115 over the same period. This shows that the strength of the two materials can be substantially increased using cement/base seal admixture. The gain in strength is due to the presence of iron oxide (goethite) which dehydrate with time to yield the higher strength (Gidigas, 1976).

##### 4.4.2. SITE RESULTS

The results presented in Table 3 show variable moisture content (6.9%-

13.5%) and relative density (86.1% to 102.4%) across the 5 sections stabilized. One of the factors responsible for this variability is the incessant rainfall experienced on site that made it difficult to control moisture during and shortly after compaction. This situation might have affected the relative density with a possible consequence on the strength and stability of the stabilized base. To obtain high-quality compaction, it is necessary to conduct a homogeneity test to control these parameters throughout the field operations. Additionally, a uniform rate of spray of chemicals need to be maintained during chemical application.

#### 4.5. CONCLUSIONS AND RECOMMENDATIONS

The laboratory test confirmed the positive effect of BS-100 on a strength of stabilized material. It has also been confirmed that the strength development of the stabilized material occurs over time. Therefore, the primary objective of confirming the suitability of BS-100 in stabilizing base course is achieved. However, the effect of stabilization on other properties such as plasticity and compaction has not been investigated. This aspect needs to be considered in future studies.

Visually, the performance of stabilized soil in the field is found to be satisfactory.

But the development of strength over time under field condition needs to be monitored. A combination of visual, geotechnical and geophysical surveys is required to achieve this objective. The current approach using only visual survey can lead to subjective assessment and wrong conclusion.

## 5. USE OF AGRICULTURAL WASTES FOR STABILIZATION – LABORATORY CASE STUDY

### 5.1. BACKGROUND

Conventionally, lime, Portland cement and bitumen have been used to appreciably improve the properties of most soils to make them meet the requirements of construction works. However, the cost of incorporating the additives is prohibitive (Osinubi 2005). Therefore, researchers and geotechnical engineers have been searching for locally available and potentially cost-effective stabilizers that can be used as a substitute or as admixes to the conventional stabilizers. One of the options considered is the utilization of agricultural waste materials such as the pod of ripe fruit of locust beans tree (*Perkia Fillicodea*). Because of the abundance of the tree, particularly in Northern Nigeria, during its season it is indiscriminately dumped and when left in the open, ferments, decays, pollutes the environment and consequently constitutes a hazard to the health of the inhabitants. Since the previous research findings (Abejide, 1997; Aminu, 1998; Jibia, 1998; Philip, 2000) have confirmed the presence of cementitious compounds in this agricultural waste, a research was conducted to assess its suitability for soil stabilization.

### 5.2. OBJECTIVE

The research was designed to achieve a dual objective of finding an economical means of soil improvement as well as safe “disposal” of waste.

### 5.3. PROCEDURE

In this research, a lateritic soil sample was first subjected to various geotechnical tests to determine its inherent physical and engineering properties, before stabilization. The laboratory tests were performed in

accordance with BS. 1377(1990) and BS 1924(1990) for the natural and stabilized soil respectively.

In the study, ash obtained by burning the empty pods of the ripe fruits of locust bean was added to laterite and then compacted under three energy levels (British Standard Light, BSL West African Standard, WAS and British Standard Heavy, BSH) at the optimum moisture contents (OMCs) and maximum dry densities (MDDs). The samples were cured unsoaked and tested after 7, 14 and 28 days. Another

set of samples were cured for 7 days under similar conditions before soaking for another 7 days to test for the moisture effect on unconfined compressive strength (UCS). California bearing ratio (CBR) specimens were cured for six days and then later fully immersed in water for 24 hours before testing to determine the soaked CBR values.

### 5.4. RESULTS

Figure 5-1 shows the results of a soil stabilized with a locust bean waste ash at BSH energy level, cured and tested for strength under different curing periods.

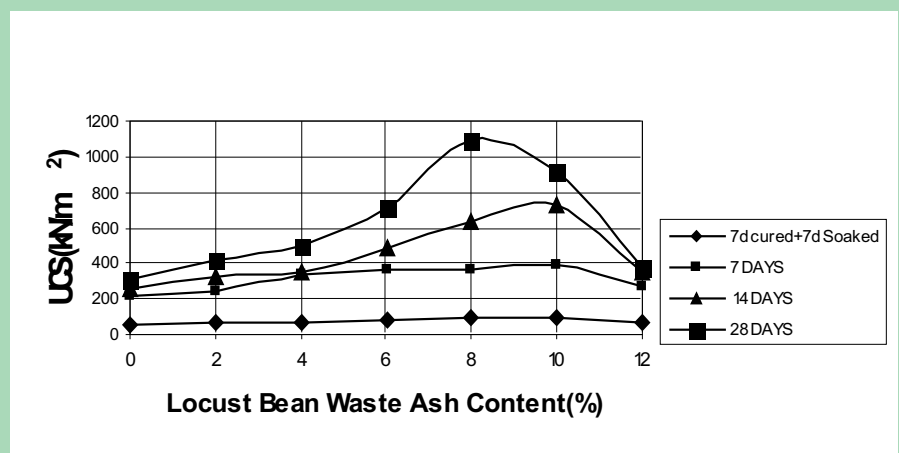


Figure 5.1: Variation of UCS with locust bean waste ash content for various curing periods (BSH Compaction)

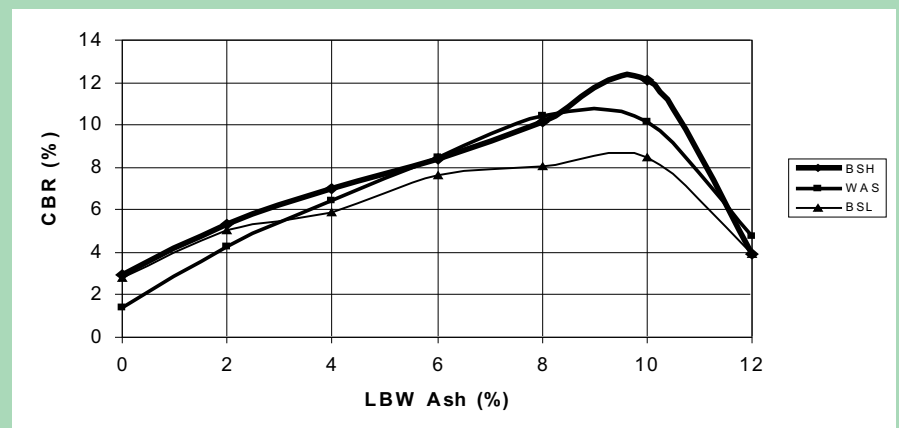


Fig 5-2: Variation of CBR with Locust Bean Waste ash

In this research, a lateritic soil sample was first subjected to various geotechnical tests to determine its inherent physical and engineering properties. The results show an increase in strength with the curing periods. It can be deduced from the graph that optimum ash content is 10% beyond which, the additive caused a reduction of strength. A similar trend is shown in Figure 5-2

when the CBR method was used to test the strength. The reduction of strength due to excess ash content is due to lower valence cations that could not be neutralized with the available higher valence cations. This reaction increased the affinity of  $H^+$  which caused a reduction in strength (Osinubi et al., 2007). The amount of effort applied determined the degree of compaction and the



resulting strength as demonstrated in Figure 5-2. The result shows that BS heavy compaction gives the highest strength followed by WAS compaction, while BS light compaction yield the least strength.

### 5.5. CONCLUSION AND RECOMMENDATIONS

From these result, it was observed that locally available LBWA up to 10% by dry weight of the soil can be used to improve the strength of lateritic soil but the values of CBR and UCS for the stabilized material did not meet the requirements of relevant standards. This shows that LBWA cannot be used as standalone soil stabilizer but 9-10% of the ash can be admixed with conventional stabilizers e.g. cement, bitumen etc., to meet the requirement of relevant standards. Never the less, using LBWA as admixture will help in reducing the cost of improving the strength properties of laterite. Therefore, further research is recommended to determine the stabilizer to be admixed with the LBWA and suitable ratio to achieve stabilization.

### 6. SUMMARY

In highway engineering, stabilization is a technique whereby low-quality pavement material is modified to improve its properties such as strength, compressibility (volume change) and durability to enable it to perform satisfactorily even under adverse moisture and stress conditions. The improvement can be achieved chemically by increasing the cohesive bond or mechanically by increasing the normal pressure of the deposit. In this paper, the concept, types and application of soil stabilization were presented. To aid the reader's comprehension, the results of the previous field and laboratory studies conducted by the author were presented. The following points are established and are worthy to note.

- Ø Soil stabilization can be achieved mechanically or chemically.
- Ø In mechanical stabilization, a natural soil can be simply compacted to improve its properties or different types of soils

are mixed before compaction to produce an improved composite material with superior quality to any of its component. This kind of stabilization relies on the inherent properties of the soil material.

- Ø In chemical stabilization,
  - o The type and quantity of chemical to be used are dependent on the pavement material properties and the groundwater condition.
  - o The optimum content of stabilizer and/or admixes must be determined through laboratory analysis before the fieldwork. Cement content higher than the optimum yields undesirable properties such as greater cracking potential, which may detract from the overall performance of a pavement.
  - o In most cases, the presence of moisture hardens the soil-stabilizer mixture thereby preserving the stability. The strength of a stabilized soil increases with the curing period.
- Ø Generally, the amount of compaction determines the degree of compaction and the resulting strength. Higher compaction energy yields higher density and higher resulting strength.
- Ø For economic reasons, industrial or agricultural wastes can be used as substitutes or admixes to the expensive chemicals conventionally used for soil stabilization.
- Ø Site stabilization must be guided by design and plan developed through laboratory study and site survey. The stabilization must be carried out, following the established procedure. Extra care must be taken during site and laboratory

works to avoid errors that could negatively affect the overall outcome.

## REFERENCES

- AASHTO (1986). Standard Specification for Transportation Materials and Methods of Sampling and Testing, 14th Edition, American Association of State Highway and Transport Officials, Washington D.C.
- ABEJIDE, O.S. (1997). Solid Soilcrete blocks for low-cost building: a nigerian case studies. Building Research and Information, E and FN Spon, London vol.25. No.1, March/April 1997 pp115-119.
- AMINU, R. O. (1998). Lime-Makuba Stabilized Soil Blocks for Low-cost Buildings. An unpublished Final year research work submitted to the Department of Civil Engineering, Ahmadu Bello University, Zaria.
- PHILIP, F. A. (2000). Rheological properties of Makuba stabilized soilcrete blocks. An unpublished Final year research work submitted to the Department of Civil Engineering, Ahmadu Bello University, Zaria.
- BELLO, A. 2011. Analysis of Shear Strength of Compacted Lateritic Soils. Pacific Journal of Science and Technology, 12, 425-433.
- GIDIGASU, M. D. (1976). Laterite soil engineering. Elsevier Scientific publishing company. Amsterdam.
- GIDIGASU, M. D and DOGBEY (1980). Geotechnical characteristics of laterized decomposed rocks for pavement construction in dry sub-humid environment. Proceedings of the 6th south-east Asian countries on soil engineering. Taipei Vol.1 Pp492-506.
- GIDIGASU, M. D (1982). Importance of material selection, construction control and field performance studies in developing acceptance specification for laterite paving gravels. Solos and Rocha, Rio de Janeiro, Brazil Vol.5 No.1. Pp 83-102
- GORSHA, K. 2018. Base Seal Studies With LCD or CKD. Geotechnical Testing Laboratory Inc. Alexandria, Louisiana, USA.
- JIBIA, D. S. (1998). Bitumen and Makuba stabilized soil blocks". An unpublished Final year research work submitted to the Department of Civil Engineering, Ahmadu Bello University, Zaria.
- NIGERIAN GENERAL SPECIFICATION (1997), "Road Works and Bridges" Federal Ministry of Works and Housing, Abuja.
- OSINUBI, K.J. (2001). Influence of compaction energy levels and delay on cement treated soils." The Nigerian Society of Engineers Technical Transactions. Vol 35, No. 4, pp.13-21.
- OSINUBI, K.J. and EBEREMU, A. O. and Aliu, O. S.(2007). Stabilization of Laterite with Cement and Bagasse Ash Admixture. Proceedings of the First Inter-conference on environmental Resc. Technology and Policy 'ERTAP 2007'
- ROBERT, L. S. (1993). Fly ash in stabilization of industrial wastes. In fly Ash for soil improvement. Geotech. Special Publications. K.D Sharp (ed) Geotechnical Engineering. Division of ASCE, No. 36, 100-115.
- SADIQ, A. A. (2009). Treatment of lateritic soil with locust bean waste ash. An unpublished M.Sc. research work submitted to the Department of Civil Engineering, Ahmadu Bello University, Zaria
- SADIQ, A., JEFFERSON, M., GHATAORA, G. & CULSHAW, M. New method of producing artificial tropical residual soils from older British soils. 4th International Conference on New Developments in Soil Mechanics and Geotechnical Engineering, 2-4 June 2016, Near East University, Nicosia, North Cyprus, 2016. 625-632.
- TRRL, ROAD NOTE 31. (1977). A guide to the structural design of bituminous surfaced roads in tropical and sub-tropical countries, Department of environment and transport. Her Majesty's stationary Office, London.
- TOOLE, T. (1987). Introduction to Soil Stabilization overseas unit, TRRL Crowthorne Berk shine, UK.
- YODER, E. J. (1979). Principle of Pavement Design. Winley Interscience Publication, Newyork, pp 711

# MOTIVATONIC FOR SELF GROWTH



Compiled by Adetunji S. S

**N**othing happens with a dream without intense hard work and long hours. But for something great to happen, there must be a dream first. Do you hear the roar of hungry, raw ambition? Let it out. It's time to make your dreams happen. Let the world underestimate you. It's the best thing that can happen to accelerate your growth. If you want to change the way people respond to you, change the way you respond to people. Less things you focus on, more things you get done. Cut everything out of your life that is holding you back. Remove what is not essential to your goals. End projects that don't support your goals. Don't hang out with people you don't really care about. Focus on what you really want.

Good is not good enough. You can do better. As long as you are alive, live every day to its fullest, frenetic pace, make every minute count. We live once. Every moment that passes is gone forever. How do you want to spend your days and years? Take the time to figure it out. Then go for it, Make it so, Do the thinking, Do the work, and, don't stop. Read aloud Now: I am self-made, I choose opportunity, not safety, I choose to be uncommon, not common. I am constantly learning, I dream big, I focus, I build, I create. I sacrifice, I work hard, I deliver, I never quit, I give, I am grateful. what all self-made have in common? Self-belief, Self-respect, Self-learning, Self-starter, Self-driven, Self-reliant.

Fear becomes easier to manage when we believe strongly in whatever we are trying to achieve. When you feel fear and risk are worth it, you will overcome fear quickly. You have all

of this in you: High energy, Determination, Perseverance, Passion, Commitment, Self-belief, Impossible dreams, Big goals, Action driven, Can-do, Problem solver, Constant learning.

Let it out. Get on it. What are you waiting for? You are ultimately responsible for who you become. You are in control of your life. Nobody else. Only you. Your future is in your hands. Start. Now. Nothing great happens without great can-do attitude. Believe in yourself to the point of delusion. You are not going to create a new reality until you believe in it. And act on it. That's what turns self-belief into self-fulfilling prophecy. It's not education. It's not your circumstances. It's not the economy. It's not your talent. It's not about how much money you have or don't have. It all comes down to 3 things. Write them down and never forget: Determination, Persistence and Learning. Trophies of yesterday don't win games of tomorrow. Keep striving. Keep hustling. Keep succeeding. In life, you can take what you want, but you have to pay for it. Price is a slice of your life, your time, your energy. Ask yourself every day if what you are doing is worth the price you are paying for it? It's never too late to go after your dreams. Facing pain, seeing things as they are, brutal and painful, that's one thing. Wallowing in pain, playing victim, self-pity is another. That's the difference between average and successful.

Why put off until tomorrow what you can do today? What you can do today, why not do it now? "Later" is enemy of success.

Be the best version of yourself. You don't like something? Change it. Can't change it? Change your attitude. Allocate 15 minutes to worrying every day. Set alarm. Start worry-time. Worry all you want about everything. Worry, worry, worry. Now you are done worrying for the day. If you find yourself worrying any other time, remind yourself it will have to wait until next "worry-time."

Only way to create your life, to live your dreams, to achieve goals is to take 100% responsibility for your life. Responsibility is a great burden. But also a source of great power. When you assume responsibility, you're no longer a victim. You're now in charge of your future.

If you don't have a clear goal in life, you will end up working for someone who does.

Desire creates excitement and motivation, Planning uses that desire to set goals. Years of hard work and relentless persistence keep you going as you struggle with the painful reality of the world. Then you succeed. Big time.

If you lack patience, you lose courage even when you face even a small obstacle. Have patience. Have faith. You will go far. What is at least one wonderful thing that happened in your life today?

Try not saying anything negative about anybody for a week. Hate is a horrible thing because it sucks out our spirit, leaving us with emptiness. Forgive. Let go. Move on. Focus on what you want. Emotional vampires are people who are consistently negative, always complaining but won't try to solve problems, always tearing down whatever you are trying to build. They will suck life out of you if you let them. Stay away from them. Focus your energy on your great goals.

"When you change the way you look at things, the things you look at change." - Max Planck

BE THE CHANGE YOU DESIRE TO SEE IN YOUR OWN TIME.....YOU DON'T HAVE ALL THE TIME!



# EMOTIONAL INTELLIGENCE:

## ANOTHER STRENGTH BESIDE BRAIN POWER

Elizabeth Aderibole

**T**he story was told of a young man who had an excellent academic credentials. While in school, he came out with flying colours in all exams he sat for. His classmates envied him because he is exceptionally brilliant, to them, his future is bright.

He had performed beautifully in a recruitment exercise of a reputable organization. He had been invited to come and collect his appointment letter. He got to the gate of the organization and the security guard asked him to observe some protocol which in his estimation is causing unnecessary delay. He entered an heated argument with the security men raising his voice, telling them he is being expected inside the office. He did not manage his emotion and disdain the men out there. Meanwhile, a security camera was recording the attitude he put forth. He was eventually invited inside, he was told that though he had a fantastic result but his appointment has been cancelled because if he can not submit to the authority at the gate, it is doubtful if he can work with the personnel inside. What has just happened is the overthrow of high Intelligent Quotient by weak Emotional Intelligence.

Emotional Intelligence (EI) is another natural endowment of God to man just like Intelligent Quotient (IQ) which has to do with the brain. Many people develop their Intelligent Quotient (IQ) by increasing their level of learning in the cognitive but fail to develop or improve in their emotional intelligence (EI) which is the display or disposition of your

behaviour.

Unlike IQ (Intelligent Quotient) which can be rated based on your level of assimilation, by formal learning which is set, emotional intelligence can be learned and enhanced. According to the World Economic Forum's future of jobs report, emotional intelligence (EI) is one of the top 10 most desirable jobs skills in 2020. Companies/organization place premium on leaders with highest IQ as smartest in the 20<sup>th</sup> century. But recent studies has shown that (EI) Emotional Intelligence is what a leader needs to exhibit in order to work with his/her team to create rapport, achieve common goals and maximize connections that can last well beyond the initial contact.

Whereas IQ is brain work, EI is from the heart i.e. feeling: one of the common definitions of EI is "the ability to recognize, differentiate and manage our emotions and the emotions of others in our environment". A person who is able to manage his/her emotion and that of the team members while under stress and pressure is said to have high EI. That's one reason companies place a high value on employee or person with the EI skills.

A great deal of research has linked EI with workplace success, leading many companies to seek this talent over more tangible skills. Empathy is the essence of EI and is the biggest single leadership skills. Empathy is the essence of EI and is the biggest single biggest leadership skills needed in today's world (Development Dimensions

International). Individuals with high EI consciously choose to be optimistic rather than pessimistic. The followings are the ways to enhance your emotional intelligence (EI).

- **PRACTICETHEART OF LISTENING:**  
To connect with people effectively requires strong listening skills. Everyone has a desire to be heard. Good leaders recognize this need and ensure that people feel heard and appreciated. There are five ways to boost your listening skills.

A leader with good listening skill will be valued by the organization and the people working in the organization. If they sense their leaders are concerned about all aspect of their lives, they will want to reciprocate and go above and beyond what is expected of them.

- Make a conscious decision to focus on the positive, although don't block out or ignore bad news. Instead of blaming or complaining, look to see what you can do to change a situation and release what you cannot.

- Let go of the past learn from your mistakes and move on. For failure is seen as a temporary setback, a lesson for future use.

- Forgive those who offends you, but don't forget the lessons learnt.

- Constantly be learning, for growth and zest for new ideas are the hallmarks of the emotionally intelligent. EI people operate from self-respect, not ego, and are open to feedback and suggestions for improvement.

- Don't be afraid of boundaries. Politely and firmly express your boundaries to others.

- Easily get along with others by developing relationships with a diverse group of people, in your environment-workplace or neighborhood.



R — L, MD/CEO, FERMA, Engr. Nuruddeen A. Rafindadi, <sup>FNSE</sup> with the National Coordinator/CEO, SERVICOM, Mrs. Nnenna Akajemeli, during her advocacy visit to the Agency on Tuesday 18<sup>th</sup> August, 2020

# FERMA PLEDGES TOTAL COMPLIANCE TO SERVICOM PRINCIPLES IN THE IMPLEMENTATION OF OGP, NAPII COMMITMENTS

By Maryam M. Sanusi

**T**he Managing Director, Federal Roads Maintenance Agency (FERMA), Engr. Nuruddeen A. Rafindadi, <sup>FNSE</sup> has said that FERMA will ensure total compliance to SERVICOM principles and directives in the implementation of the Open Government Partnership (OGP) 2<sup>nd</sup> National Action Plan (NAPII), promising that the Agency shall always provide adequate information to all customers, both internal and external on the processes for seeking redress in case they are not satisfied or have concerns on services received.

The Managing Director made this pledge in his welcome address on the occasion of the Advocacy visit to the Agency by the National Coordinator/CEO SERVICOM recently.

Rafindadi said the advocacy visit of the National Coordinator/CEO SERVICOM and her team was a show of commitment to actualizing the success of the SERVICOM initiative on the implementation of Open Government Partnership (OGP) 2<sup>nd</sup> National Action Plan (NAPII), he added that the visit was laudable as this would accord the Agency's Management the opportunity to be further enlightened on the President's commitment to improve Service Delivery, Implementation of the Open Government Partnership 2<sup>nd</sup> National Action Plan (NAPII) and the compliance roles of the Agency.

The National Coordinator/CEO, SERVICOM, Mrs. Nnenna Akajemeli said the visit was to seek the partnership of the Agency on the "delivering on commitments in improved service delivery Thematic Areas". She said Open government Partnership is a global coalition of reformers from government and civil society working together to make

government more transparent, participatory and accountable to truly serve and empower citizens, adding that the OGP initiative present a platform for creation, partnership and collaboration between Government, Civil Society organizations and private sectors in achieving the OGP developmental processes.

Continuing, the SERVICOM Coordinator said the OGP initiative is governed by four key principles which include Transparency, Accountability, Citizen Participation and Technology and Innovation. Akajemeli further disclosed that the OGP which was founded in 2011 by eight (8) countries was signed into by the President of the Federal Republic of Nigeria, Muhammadu Buhari in July 2016, thereby making commitment to ensure full implementation of the processes to fight corruption and assure accountable, transparent, citizen focused and improved service delivery to Nigerians.

These commitments she said, are contained in the First National Plan (NAPI) with 2 years implementation period (2017-2019), having Fiscal Transparency, Anti-corruption, Access to information and citizen's engagement as it Thematic pillars.

Upon review of NAPI by the National Coordinator/CEO, SERVICOM and her team of experts, it was concluded that the underlying goal of the Presidential Commitment under OGP was to improve Service Delivery to the people of Nigeria, which falls squarely within the mandate of SERVICOM initiative.

Consequent upon the conclusion, the President approved improved Service Delivery Thematic Area with Commitments 15 and 16

which was included in NAPII with SERVICOM as the lead Agency, and this was ratified at the Washington DC meeting of the OGP in 2019.

NAPII implementation period is 2019 – 2021 with improved Service Delivery, Inclusiveness, Anti-corruption, Focal Transparency, Extractive Transparency, Access to Information and Citizens' Engagement and Empowerment being the thematic areas.

Mrs. Nnenna Akajemeli said FERMA is one of the pilot MDAs to advance implementation of OGP initiative due to the centrality and importance of the Agency's mandate, and because of the nature of service the Agency deliver to the Nigerian citizens.

She added that SERVICOM in partnership with FERMA will adapt the strategy of advocating for total commitment and buy-in by Honourable Ministers, Permanent Secretaries/CEO and key Partners/Stakeholders on implementation of improved Service Delivery commitment through pilot projects, including development/review and implementation of Service Standards as contained in service charter(s) of selected service windows in line with National Guidelines, Development of monitoring and reporting framework for the implementation of selected service windows, put systems/mechanism in place to ensure implementation of Service Standards within the delivery period of OGP NAPII 2019-2021, CEOs to spearhead, own and support their staff sensitization/training for the project and awareness campaign for their service takers.

Other roles, Nnenna said include the identification and nomination of transformers/champions of reform, i.e. committee members from key technical service departments that will ensure standard performance implementation, monitoring and reporting with terms of reference.

The MD, FERMA in response said the Agency already has in place an effective and working SERVICOM Unit with experts from different Departments that are driving SERVICOM principles in the implementation of OGP.







# FERMA, FHA PARTNER TO RESOLVE ROADS AND HOUSING CHALLENGES

By Maryam A. Umar

**T**he Federal Roads Maintenance Agency (FERMA) and the Federal Housing Authority (FHA) have entered into partnership with the aim of resolving the problems of housing and road maintenance which has consistently given Nigerians, and especially the civil servants cause for concern.

This collaboration was cemented today when the Managing Director of Federal Housing Authority, Senator Gbenga B. Ashafa and his Executive Director (Business Development), Hon. Abdulmumin Jibrin paid a courtesy visit to the MD, Federal Roads Maintenance Agency at its Abuja Headquarters.

The Managing Director, FERMA, Engr. Nuruddeen A. Rafindadi, FNSE, FAEng, said the partnership of FERMA and FHA is a force to reckon with because of the personalities involved, and the spread of both organizations which cut across all the

States of the Federation. He said the partnership will form a backbone upon which housing and roads maintenance will be further developed.

Rafindadi said one of his major concern since he took over the headship of FERMA has been the condition of service of the staff, he said, "Since I came to FERMA, one of the main problem that

has given me concern is the condition of service of staff, the pay is low, the housing allowance is low, and there is no access to affordable housing as much as one expects"

The MD further stated that with this partnership, FERMA can help FHA to solve

the problem of access roads to their Estates, while FHA addresses the housing problems of the staff of the Agency. He immediately constituted a technical committee to work out modalities to achieving success with the partnership. He added that the partnership will be effective as both FERMA and FHA are both Parastatals under the Federal Ministry of Works and Housing, where the Minister is keen on delivering on the President's resolve to solving the Nigeria housing deficit.

Speaking earlier, the MD, FHA, Senator Gbenga B. Ashafa, said he is happy collaborating with FERMA as the partnership will serve as a model to other Agencies. He said, FERMA can compete with any construction company that deliver infrastructure in terms of roads. He also said that with the array of professionals in FERMA the problem of access roads to FHA Estates will be solved.

Senator Ashafa pledged total commitment to the partnership with FERMA.

Commenting, Hon. Abdulmumin Jibrin, added that FHA believes in the partnership, saying FHA has professionals that will be able to work harmoniously with those of FERMA to achieve the set goals of this partnership.

Engr. Silas Abdullahi Buba, the Executive Director East Operations and Board member representing North Central Zone, in his own comment appreciated the FHA MD and his team for identifying FERMA as a worthy partner.





# COURTESY VISIT



AMINA MOHAMMED OF NIGERIA, DEPUTY SECRETARY GENERAL OF THE UNITED NATION  
ON A COURTESY VISIT TO FERMA HEADQUARTERS. THE MANAGING DIRECTOR  
OF FERMA, ENGINEER NURUDEEN A. RAFINDADI, FNSE



NIGER STATE GOVERNOR, ABUBAKAR SANI BELLO ON A COURTESY VISIT TO FERMA