

Dynamics, Implications and Management Strategies of Transport Constraints in Fako Division, South West Region-Cameroon



Tufoin Kilian Diang, Tosam Hycinth Ngong, Ngwa Patience Lum, Ajukebi Linda Ebob, Ndi Roland Akoh

Abstract: *Transport dynamics and management strategies of emerging constraints for efficiency and development is critical. When transport systems are poorly integrated with insufficient infrastructure, worst of all in the mist of insecurity, it hinders mobility, production and distributions making development to be stunted. It was against this premise that this study was designed to investigate the dynamics, implications and constraints confronting the transport sector in Cameroon and in Fako Division in particular. These are key issues that cannot be relegated to the footnotes and if actions are not taken development will be dared. Data for this study were sourced from secondary and primary sources. Secondary data were obtained from exploration of published and unpublished documents relevant to the study. Reports, journals, articles, decrees made up some of these documents. Primary data were sourced from field surveys where a convenient sampling technique was used to administer 313 copies of questionnaires to 10 sampled localities in Fako Division. Auxiliary primary data were gotten via interviews and observations in motor parks and ports and along the Fako coast. Results indicated that the transport sector in Fako Division is dynamic and have induce and plethora of related activities since it is derived demand. Response score revealed (52% and 41%) of high appreciation and appreciation respectively to the relevance of transport in trade and commerce. emerging constraints were noted to be; insecurity, depreciating infrastructure and loosely integrated systems of transport which is bogging down mobility, efficiency and effectiveness of the transport sector in the Division. Also, results noted that management strategies of the emerging challenges transcends to curbing insecurity, improving transport infrastructure to effectively integrating transport modes and systems. Furthermore, revamping the secondary ports (Tiko, Limbe and Idenau),*

construction and rehabilitation of road edges and vertices can improve the functional and transactional operations of the transport sector in Fako Division and in Cameroon in general. This study recommends an effective integration and improvement of transport infrastructure in Fako Division to boost the transport sector to be more dynamic and efficient to induce development.

Keywords: *Fako, Development, Transport, Constraints and Dynamics*

I. INTRODUCTION

Transport and transportation in general throughout history represents the economic wealth of the people and nations. It is often asserted that, *where a road passes, development follows*. This points out the role of road transport and connectivity in development which ought not to be taken for granted. Proper and well organised transport systems are essential to the sustenance and growth of any nation [1]. Transport systems are closely related to the socio-economic changes and dynamics of activities. Transport development in the overall activities of a nation gives the ability to deliver efficiently in an improved affordable, accessible, safe and in a reliable way. More so, a well-integrated transport system will prosper the economic, social and political segments of the country. Transportation is not demanded for its own seek but for related activities supported by transport. This makes transport a derived demand as the sector in itself is not productive but is responsive to forces in the production and consumption sectors [2]. This makes the transport sector in general a key factor for development and wealth creation because of its dynamics and the ability to diversify socio-economic activities. It is underscored that the adequacy of transport infrastructure determines a country's success to another [3]. The scholars pointed out that without a proper transport infrastructure in diversifying production, expansion of trade, coping with population growth, reducing poverty, or improving environmental conditions would render development stunted. A good and a well-coordinated transport sector is capable of raising production especially in the agriculture sector thereby lowering prices which is an aspect of food security which is gradually becoming a challenge in most cities in developing countries. On the contrary, poorly maintained roads or transport infrastructure in general restricts mobility, increases vehicle operating cost, increase accident rates and even exacerbate isolation of regions and localities.

Manuscript received on 20 Jun 2023 | Revised Manuscript received on 11 July 2023 | Manuscript Accepted on 15 November 2023 | Manuscript published on 30 November 2023.

*Correspondence Author(s)

Tufoin Kilian Diang*, Ph.D Scholar, Department of Geography, University of Yaounde 1, P.O Box 755, Yaounde, Cameroon, E-mail: tufoinkidiang@gmail.com, ORCID ID: [0009-0009-1376-7247](https://orcid.org/0009-0009-1376-7247)

Dr. Tosam Hycinth Ngong, Department of Maritime Transport, Higher Institute of transport and logistics, University of Bamenda, P.O. Box 39 Bambili, NWR-Cameroon. E-mail: hycinton@gmail.com, ORCID ID: [0009-0001-5613-0416](https://orcid.org/0009-0001-5613-0416)

Ngwa Patience Lum, Ph.D Scholar, Department of Geography, University of Bamenda, P.O. Box 39 Bambili, NWR-Cameroon. E-mail: ptcngwa@gmail.com, ORCID ID: [0009-0005-7537-9742](https://orcid.org/0009-0005-7537-9742)

Ajukebi Linda Ebob, Ph.D Scholar, Department of Geography, University of Yaounde 1, P.O Box 755, Yaounde, Cameroon. E-mail: lindaleen5@yahoo.co.uk, ORCID ID: [0009-0009-4353-2780](https://orcid.org/0009-0009-4353-2780)

Dr. Ndi Roland Akoh., Department of Geography, University of Yaounde 1, P.O Box 755, Yaounde, Cameroon. E-mail: ndirolisonakoh@yahoo.fr, ORCID ID: [0009-0007-7146-0249](https://orcid.org/0009-0007-7146-0249)

© The Authors. Published by Lattice Science Publication (LSP). This is an open access article under the CC-BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

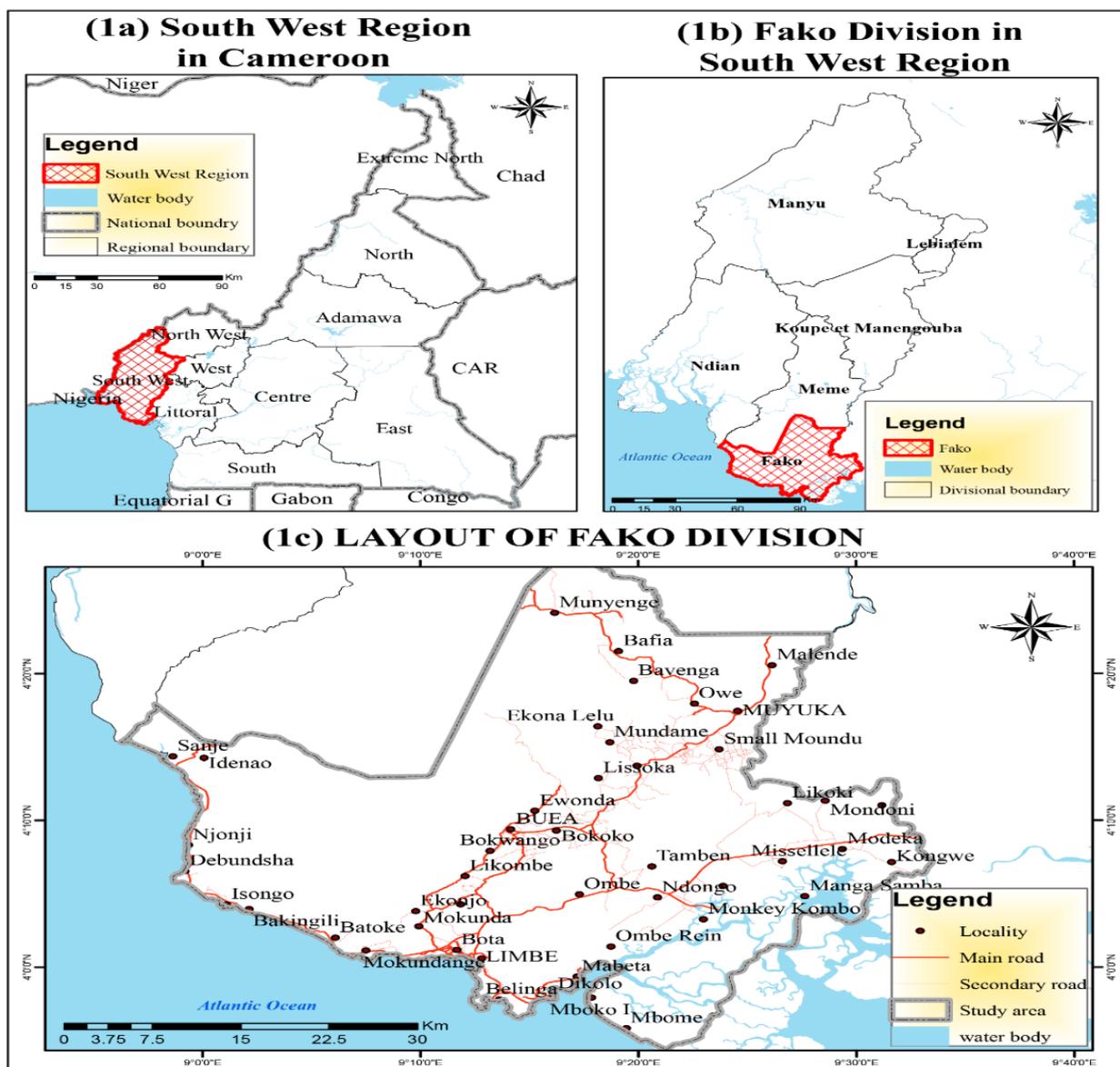
Dynamics, Implications and Management Strategies of Transport Constraints in Fako Division, South West Region-Cameroon

Such poorly developed infrastructure is capable of increasing poverty rate, illiteracy and poor health in rural communities by limiting access to health units [4]. Despite investment in the transport sector in Cameroon, particularly in Fako Division, the transport sector is general is still not optimal [5]. Roads are being characterised by traffic jam, insecurity, and limited infrastructure in most cases. In the case of seaports, they are poorly maintained and not well connected to other modes of transport in the Fako Division [6]. This has made it difficult in achieving efficiency in the transport sector. Given the importance that transport infrastructure (roads, railways, and ports) play in the flows of goods, people and services, it is indispensable to understand the impact that transport and transportation play in the development of a country especially at local levels by stimulating economic growth and development. In the Fako Division of Cameroon where this study was carried out, there exist mainly two modes of transport; maritime transport and road transport which are very dynamic and has

diversify a number of activities. The discourse presented here paints a vivid picture of transport dynamics, implications in development and emerging constraints. This study argues therefore that transport in Fako Division is dynamic, have development implications and some emerging challenges that necessitates sustainable management strategies.

II. THE STUDY AREA

This study was carried out in Fako Division, located in the South West Region of Cameroon which is situated at the foot of mount Cameroon (Figure 1). It covers a surface area of 2093km² and an average altitude of 2833m. It is the most thickly populated Division in the South West Region of Cameroon with a household number of about 534854 inhabitants. Temperatures are about 26.4 °C around the coast area and lower towards the flanks of the mountain [7].



Source: Field survey, 2022

The Division is separated to the north by Meme Division and to the west by the Littoral Region. To its entire southern part, it is separated by the Atlantic Ocean having three secondary ports; Tiko, Limbe and Idenau. The Fako coastal zone stretches from Kangué in the Douala VI Sub-division to Tiko through Limbe, Batoke, Bakingili to Sanje in the north western part in Idenau where it shares boundaries with Bamuso in the N'dian Division of the Southwest Region of Cameroon [6]. This Division is also a host to many industrial plantations in South West Region such as; the Cameroon Development Cooperation (CDC) PAMOL etc. It has two modes of transport; road and maritime transport. This Division is usually described as a legendary town and hospitality.

III. METHOD AND TOOLS

To be insightful about transport and transportation in the Fako Division, a scoping study was piloted in the study area. The study was based on both qualitative and quantitative data sourcing. Qualitative data were obtained from related literature review on transport dynamics, development implications, emerging challenges and management strategies. To this effect, the Buea National Archives (BNA), transport projects, reports, decrees and internet sites were exploited to obtain pertinent information relevant to meet the study objectives. Also, libraries in Buea University, port authorities and Council Development Plans were all exploited to gather data for the study. These data were largely qualitative in nature. Some of the documents were rich in information and gratifying that helped in data analysis.

Primary qualitative and quantitative data for the study were collected in the field following some sampled localities in Fako Division on the basis of their transport dynamics and modes. The rationale for field inquiries were to examine the extent to which transport contributes to development, point out emerging challenges and management strategies by stakeholders. Questionnaire administration followed a convenient sampling technique that was used to administer 313 copies to sampled households. Both participant and on-the-spot observations were effectuated with some key informants. A GPS was used where necessary to collect way points such as motor parks, port sites etc which were later spatialised on the shape file map of Fako Division for analysis. Semi-structured and structured interviews were conducted with some relevant transport stakeholders and authorities on issues concerning transport, development implications, emerging constraints and some management strategies in Fako Division. Qualitative data were processed by the use of *in vivo* data coding approach whereby categories of responses were identified, classified and then recorded on a prepared sheet as per research objective of the study. The themes were drawn from the different categories of codes identified; transport and development, constraints, management strategies amidst others which is an approach commonly used in qualitative data. As concerns quantitative data, the Statistical Package for Social Sciences (SPSS) and Excel software were used for data processing. Tables and figures were generated containing mean scores, frequencies and percentages that

were exploited for analysis. Cartographic data were processed and maps realised by the use Geographic Information System (GIS) and MapInfo.

IV. RESULTS AND DISCUSSIONS

It is undeniable that transport and transportation in every society directly relates to development. As it is commonly put, *where a road passes, development follows*. This simply means that where roads or transport infrastructure in general are bad or absent, development is bound to be handicapped in such areas. This couples with proper related challenges faced in the transport sector such as; traffic jam, insecurity just to name a few which are supposed to be handled in a more succinct and tactful ways to encourage production and distribution, the flow of goods and services and passengers.

A. Transport dynamics and development implications

The dynamics of the transport sector in Fako Division have greatly induced development through the emergence of other in the transport sector. These activities are many and diverse. They range from the creation of motor parks, development of petit commerce, road side vendors to the development of ports (Limbe, Tiko and Idenau). These have gone a long way to induce development significantly in the Fako Division.

B. Trade and commerce

Transportation in Fako Division; be it road or maritime transport has stimulated trade and commerce in the region which are key aspects of development. First of all, this has been made possible by the creation of several motor parks across the Division. During field observations in motor parks, it was noticed that several petit businesses are developing and continue to develop thanks to the creation of motor parks. These were the cases of the Mile 17 motor park, Mile 4, Mile 3, Tiko, Mutengene, Idenau and in Limbe. So many activities of trade and commerce were being operated such as; selling of bread to passengers and other basic food stuffs. This has not only promoted these commercial activities but also provided jobs to many in the area though most of the jobs and even some of the activities are informal. It was therefore, important to explore respondents views on the extent to which transport development have promoted trade and commerce in the Fako Division (Table 1).

Table 1: Respondents views on transport and promotion of trade and commerce

Sampled Towns/quarters	Eff. No/Resp.	Transport and promotion of trade and commerce			
		Highly appreciative	Appreciative	Not appreciative	Indecisive
Idenau town	62	31	26	5	0
Bakingili	14	7	7	0	0
Gardens	39	19	14	6	0
Buea town	11	6	5	0	0
Batoke	42	18	22	0	2
Bota land	15	7	4	4	0
Limbe town	32	21	10	1	0
Ombe (Mutengene)	7	4	3	0	0
Muea	82	42	37	3	0
Tiko beach	9	8	1	0	0
TOTAL	313	163	129	19	
%		52	41	6	0.63

Source: Field work, 2022

From table 1, it can be ascertained from responds scores that the transport sector in the Fako Division has contributed significantly in the promotion of trade and commerce. 52% score highly appreciated the fact that transport has promoted trade which 41% also gives and appreciation to this effect. Only 6% did not allude to this. This is probably those in areas with poor transport network or better still infrastructure in the Division. Field observation revealed fuel stations placed around Motor Parks and even those operating illegal fuel sales commonly called *funge* mostly smuggled from neighbouring Nigeria. To add, mechanic shops, garages, sales of spare parts and other related gadgets were all aspects that characterised trade and commerce emanating from the transport sector in the Fako Division. Interviews with some petit traders in Mile 17 Motor Park highlighted that transport activities especially travelling agencies like; MUSANGO, AMOUR MEZAM,

GAURANTEE Express have make transport activities very dynamic in Fako Division. Jobs and employment opportunities have been created, commerce and trade develop and a host of many other related activities that needs not much emphasis.

As concerns maritime transport, substantial volumes of goods are imported and exported at the ports present along the coast of this Division which host three seaports as earlier mentioned. The Fako coastal belt of Cameroon host three secondary seaports which have become a prominent seaborne trading hubs with thousands of tonnes of goods completed at these ports annually [6]. Data gathered from the PAL dataset from 2015-2020 revealed that from the port of Tiko, Limbe to Ideanu, hundreds of thousands of tonnes of dry bulk cargo are completed via these ports annually (Table 2).

Table 2: Imports and Export statistics along the Fako coast (2015-2020)

Ports	Imports and Exports in tonnes	YEARS					
		2015	2016	2017	2018	2019	2020
Limbe	Import	21,141.76	22,313.45	20,274.56	23,349.10	24,078.23	25,930.00
	Export	4,997.89	6,702	7,990	8,267.87	8,282.44	8,987.56
Tiko	Import	16,274.98	17,398	17,492.5	18,872	19,201	20,981
	Export	3,495.89	4,782.9	6,973	6,779.8	7,567.82	9,458.04
Idenau	Import	9,89.7	1,023	1,234	1,567	1,982	2,456
	Export	213	341	389	678	872	982

Source: Field work, 2022

Table 2 reveals that the port of Limbe from 2015-2020 registered increasing trends of imports and exports, though imports are projecting more than exports. For instance, in the year 2015 imports were 21,141.76 tonnes against 4,997.89 tonnes while in 2019 [9]. for instance imports were 24,078.23 tonnes against 8,282.44 tonnes. However, the trend seems to be increasing simultaneous though are imports remains high. A similar trend is observed with the port of Tiko and Idenau. The increase tonnage of cargo completed via these ports gives an eloquent testimony that the Fako coastal belt is indeed a veritable maritime trading hub. The goods completed at the ports are mostly trade articles such as; cosmetics, textile materials, plastics goods, amongst others. Imports are of a wide variety and range from automobile spare parts, vehicles, textile material, drinks, cotton, robber, cereals amidst others. This trade combines road transport and maritime transport since maritime transport is multimodal in nature. These two modes of transport have encouraged the flow of goods and services within the Division, to other regions of the country

and out of the country to countries Like Chad, Gabon, Nigeria, and Equatorial Guinea among others. From the afore seen, it is glaring that the transport sector in Fako Division is well positions to ensure development in diverse ways of our dear country especially arriving *Horizon 2035* where the country's emergence development plan is placed. With all these there exist a plethora of constraints plaguing the transport sector which are important to identify, show their manifestations and then, a sustainable management strategy to these constraints.

C. Emerging challenges in the transport sector

Despite the fact that the transport sector in Fako Division contributes significantly to the development of the Division, there are a number of constraints that stand as a stumbling block to the effective and efficient operation of the transport sector.



These challenges range poor and dilapidated infrastructure, absent of roads in some cases, insecurity, poor integration of the different transport systems by way of linkages to connectivity amidst others.

D. Insecurity and implications on transport

At the moment, the two Anglophone regions of Cameroon; Northwest and Southwest are facing serious socio-political crises since 2016. Fako Division inclusive. These crises are characterised by road blockages, destruction of road infrastructure such as; bridges, breaking of paved road and burning tires on the way to scare the population. More so, the crises are also characterised by *ghost town* days which goes a long way to limit circulation and the flow of goods and services.

This simply means that, in such days which are highly respected by the inhabitants, transportation is halted and economic activities are at zero. This has gone a long way to cripple transport activities and many other activities in the Division which is highly affected by the crises. However, the intension here is not to focus on the crises but how it has stand as a barrier to transport efficiency and effectiveness in the study area. In most areas, roads are being rendered almost impassable by the armed gangs. According to interviews, the armed gangs placed stones and tree stumps on the road to stop circulation which can go for days. Imagining such conditions in the transport sector for over 7 years, one can be contented that transport and its related activities have really been disturbed from effective operation and functioning. It is noteworthy to underscore that these crises have play negatively on the development of the area through; limiting mobility, trade and commerce, and the general flow of goods and services. In the maritime transport sector, insecurity here is mostly emanating from the sea especially closer to the borders with Nigeria. Key informants reliably informed the study that the Biafra crises in Nigeria and the Anglophone crises in Cameroon combine together are instigating maritime insecurity between the two bordering countries. This assertion is probably prompted by the free circulation of arms used by the armed gang to robe sea vessels and crew members which is something critical to the transport sector. [8] It was reported that illicit trade ranges from informal cross-border leading to more serious crimes such as trafficking in wildlife, fuel, weapons, and drugs. This illegal trade is very common in the Fako coastal belt of Cameroon where the circulation of contraband products is very active. Arms and ammunitions are all used to robe vessels which sometimes extend even to land [8]. Further noted that a sea pirate radiates from the Delta State in Nigeria to Idenau, Tiko and Limbe in the South West Region of Cameroon all found in the Fako Division of Cameroon. These insecurity concerns to a greater extent has bog down the effective operation of the transport in the Fako Division and beyond since transport and its activities are not limited to the division alone

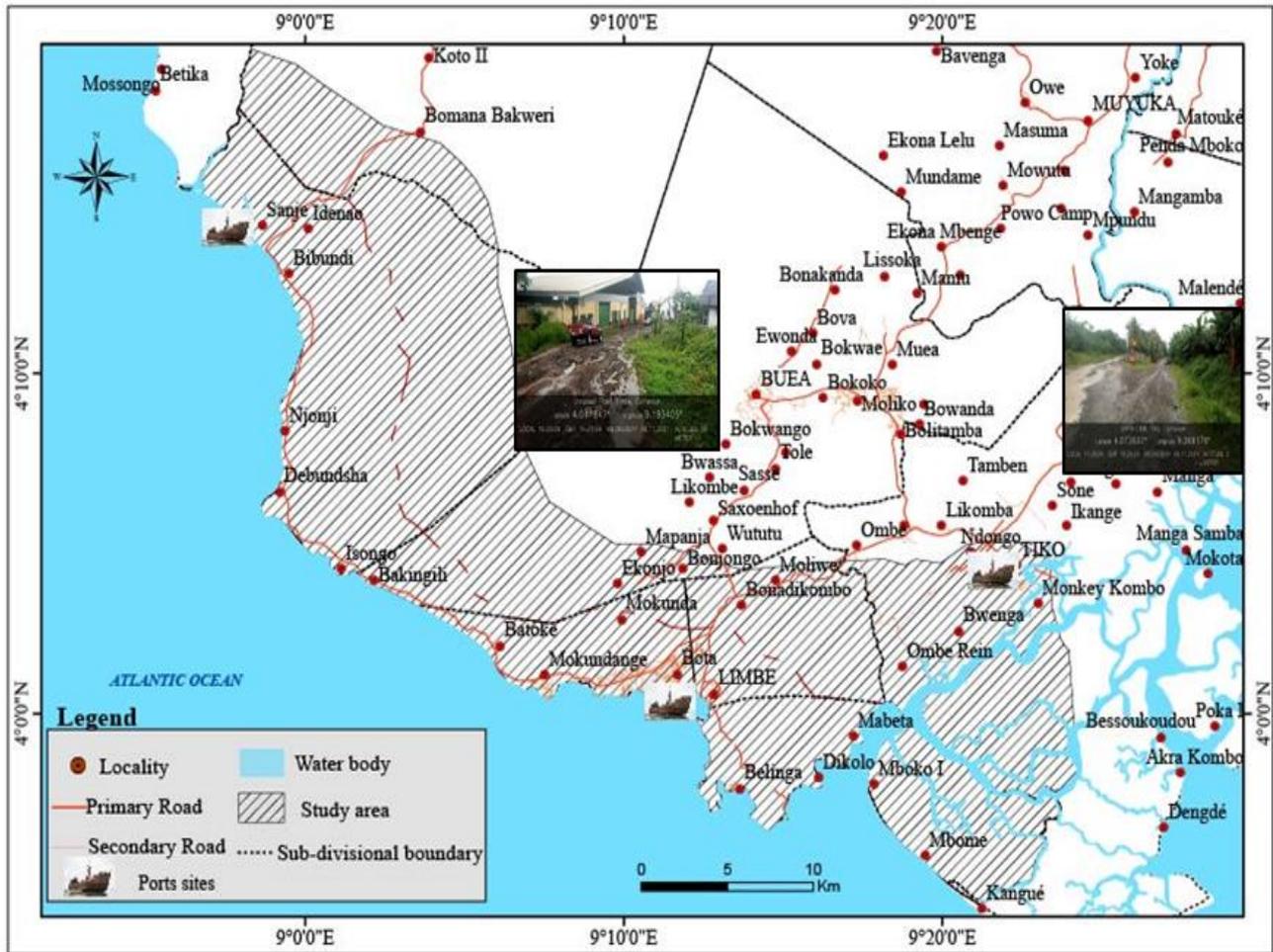
E. Adequacy of transport infrastructure

The United Nations Convention on Trade and Development (UNCTAD) continue to hit hard on a sustainable and an adequate transport infrastructure which is a pre-condition for efficient intermodal and logistics transport services.

Transport infrastructure designates state of roads, bridges and any other related facilities that can be used to support activities be it maritime or land transport. Field surveys revealed that the states of most roads are poor and almost not motorable during certain seasons. This is mainly the case with earth roads which are mostly used as farm-to-market roads. This is very critical in an area like the Fako Division where agricultural activities are dominant given the rich volcanic soils. Most of the roads are characterised by potholes, stagnant poles of water among others. A single stretch links the major urban centres in this Division such as; Buea, Limbe I, II & III, Mutengene, Idenau and a host of other urban centres here. In most cases, traffic jam is a common phenomenon in such roads given the limited number of roads and small sizes. As concerns the maritime transport sector, port infrastructure and facilities are poor and porous. In fact, it seems from the colonial days no improvement or rehabilitation works have ever been carried in these ports. Maritime transport infrastructure and facilities such as ports/anchorage sites, repairs of ships, harbours, shipyards, warehousing, freight forwarding services and other related logistics or support services are a prerequisite for maritime transport to be effective and efficient in all its operations [2, 9]. Field surveys, paints a contrary picture to this phenomenon along the Fako coast where these three ports are found. Port reception facilities, storage facilities and linkages of ports to land transport were all poor and bad. Some of the infrastructure and facilities that were put in place by colonial masters have long been abandoned such tramways in the ports and some ware houses. These are all challenges/constraints facing the maritime sector along the Fako coastal belt of Cameroon. It should be noted that, modes of transport do not operated in isolation but well integrated for effectiveness and efficiency.

F. Integration of transport modes

A reasonable development of the maritime transport sector requires a simultaneous development of other transport modes which are not alternative but rather interdependent [2]. It is underscored that intermodality is a process of operating a door-to-door and warehouse-to-warehouse service for the shipper involving two or more forms of transport with merchandise being conveyed in the same unitised form for transit [10]. For goods to be effectively delivered, shippers normally arrange two or more modes of transport for their goods to be efficiently delivered at the destination. This gives the strength of an integrated transport system for effective operation. In simple terms, transport modes do not operate in insolation rather, they depend on one and the other for efficiency and effectiveness. Field observations in the Fako Division showed that, rail transport is absent but however, this Division has both road transport and maritime transport. As earlier noted, the maritime transport sector here operates in three secondary ports dealing in substantial volumes of goods and other related services. Unfortunately, these transport modes are poorly integrated to each other. For instance, the ports are linked with a poor and porous state of the road which are not even paved. This marks truck to dangle on these roads and sometimes even fall off. Glaring examples are the ports of Limbe and Tiko (Figure 2)



Source: Field surveys, 2022

Figure 2: Road network and ports in the Fako coastal belt of Cameroon

As shown by figure 2, the road network connecting the various ports is very poor. In fact, ports here seems to function in isolation from other modes of transport mainly roads. From the port of Tiko to that of Limbe and Idenau, they are connected with a poor road network linking the ports. All these ports have only single entrance and exit characterised by poor earth roads which are not paved. This has made it difficult to easily distribute goods and services in these areas. An effective integration of transport modes will ensure transport efficiency and effectiveness especially as far as production and distribution are concerned. These are all emerging issues facing the transport sector in Fako Division that sustainable management strategies are to be devised and deal with them. It is noted that development and optimising such information is costly but sustainable strategies are supposed to be developed and placed in the development agenda.

G. Sustainable management strategies of emerging constraints

The role played by the transport sector in socio-economic lives of the people and development in general is pivotal and cannot be relegated to the footnotes for whatever reasons. This simply means, the transport sector is supposed to be void of all functional and transactions handicaps. This can only be done by designing appropriate strategies to deal with such constraints.

H. Combating insecurity in the transport sector

Fighting insecurity which does not only stand as a barrier to the transport sector but also as a general threat to the entire population is a prerequisite. Having pointed out the implications of insecurity to the transport sector in Fako Division, it is important to work hard to combat insecurity at all cases. This insecurity as already noted cuts across crises, theft, and maritime piracy and even to road accidents. Fighting crises simply requires a holistic approach involving all the parties to ensure proper handling. However, as far as transport is concern, it is important to tackle the emergence of the illegal transport sector which is commonly used by armed groups to perpetrate their activities such as blocking roads and cutting bridges. The emergence of these clandestine transport sector largely using commercial motorbikes and unregistered vehicles are actually the ones used by the armed groups. Field interviews confirmed to this ascertain that armed groups hide in the bushes and use illegal transport components to operate their activities. It is very in the Fako Division. So, tackling such in the transport sector means that it is very important to monitor closely the unregulated transport sector.

This can be done by reinforcing police check points and major road segments and ensuring that all vehicles and motorbikes commonly used by these criminals are all in regulation and policies in force in accordance with Prime Ministerial texts on transport regulations. This may go a long way to reduce insecurity induce by crises and armed forces simultaneously in our roads. As concerns maritime insecurity present and very common along the Fako coastal, good management strategies according to uniform officers can be by improving and reinforcing security along the coast belt. Also, accompanying vessels during sales by military officers such as the *Batalion Intervention Rapide* (BIR) to destinations and vice versa to by other countries by the respective marine forces can stand the test of time to all forms of maritime insecurity concerns which at the moment is a critical concern in the maritime sector especially along the Gulf of Guinea in general which the Fako is an integral part. This will also go a long way to limit the circulation of illegal goods like drugs and light weapons. In summary, effective cooperative among countries of the region and the use of modern technologies by the navies can go a long way to limit insecurity in the region. This is central because at times maritime insecurity extends to land like in the case of Fako coastal belt of Cameroon.

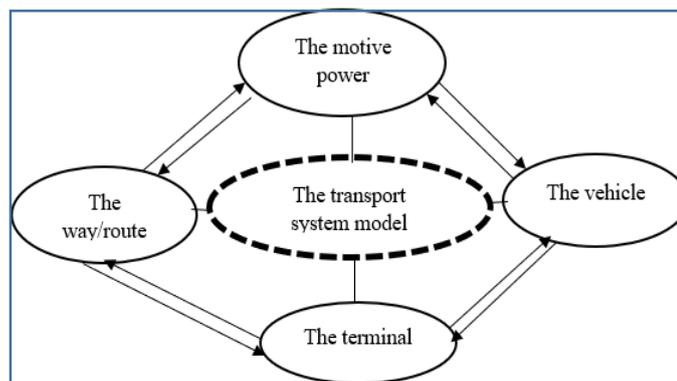
I. Optimising transport infrastructure for efficiency

Support infrastructure and connective function of any transport mode are pivotal for the efficient functional and transactional operations without which it becomes stunted and cause delays or malfunction. This once more points out the relevance and significance of improving transport infrastructure. As earlier noted, these infrastructure stems from roads, railways ports and the vehicle components which must be optimised to ensure efficiency. As concerns roads, it is very important to increase road sizes to reduce traffic jam and ease the easy flow of goods, services and the population. For example, the single stretch of the road linking Limbe to Idenau ports needs to enlarged to ease the free and ease of the hundreds of heavy duty truck that ply to road on a daily bases. More so, filling of potholes and properly canalising culverts can help keep the roads in a good state for effective use. It only when good roads exist the development, trade and commerce and all what goes with it can follow. It also important to create road management and maintain commissions to effectively follow-up the state of the road for repairs. These commissions are usually created in some cases but never

effective. Thus, the state has to reinforce such capacities and initiatives for the effective follow-up and maintenance of our roads. concerns maritime transport infrastructure and facilities such as ports/anchorage sites, repairs of ships, harbours, shipyards, warehousing, freight forwarding services and other related logistics or support services are a prerequisite for maritime transport to be effective and efficient in all its operations [11]. Land infrastructure designated for the reception of personnel or cargo transported by the sea and that which serves as an authorized port of entrance into or departure from country/place of departure to the point/country of arrival represents one of the most important maritime transport facilities [12]. Thus, optimising port infrastructure such as; warehousing, jetties, shipyards are very important in facilitating transport efficiency. The case of ports along the Fako coastal belt of Cameroon is a situation that needs remedy. It is characterised by negligence, lack of will to improve the infrastructure both soft and hard one. These are secondary ports that handle thousands of tonnes of goods as earlier indicated in table 2. It seems since the colonial days, the no rehabilitation works have been carried there. Thus, improving transport infrastructure in these ports and in the general area will boost the transport sector efficiency thereby inducing development which is the dream of every society.

J. Effective integration of transport modes and systems

When transport modes are not effectively integrated to each other, there is bound to be a problem at the level of the supply and distribution chain. This probably explains why [2] underscored that, it is pretty difficult for a country or a community to claim to enjoy transport and transportation if all the modes of transport are not interconnected together or disintegrated from each other. Confronting this discourse with field investigations in the Fako Division of Cameroon painted an adverse image as the transport modes were not connected to each other. For instance, the seaports present here are not well connected with a good road network nor with railway linking the ports together. It seems the different transport modes operate in isolation from each other. In furtherance, it is important to point out the relevance of transport system application to the effective integration of transport systems and modes in a manner to have an overall impact on the development agenda of the country (Figure 3).



Source: Adopted and modified from (13)

Figure 3: The transport model system



Legend

- The Vehicle* ↔ *Cars, Ships, Aircrafts, Wagon.*
- The Motive Power* ↔ *Engines/Locomotives,*
- The Way* ↔ *Roads, Sea routes, Airlines/Air Ways, Rail Tracks.*
- The Terminals* ↔ *Garage, Car Parks, Sea Ports, Air Ports, Train Stations.*

It is noted that a maritime industry without a well-coordinated railway or road system is like a ship in a desert” this ascertain further affirms the interdependence that exists between ports, railways and road system to connect cargo (import and export) to and from maritime transport gateways [13]. Therefore, a reasonable development of the maritime industry or road systems requires a simultaneous development of a well-coordinated development of other modes; road, railway and even air transport systems. The maritime transport mode for instance does not operate in isolation without the full integration of other transport modes or systems. A well-integrated transport systems keeps life and economic activities going without which everything becomes stunted and deficient especially manufacturing and distribution [14]. So, effectively integrating the various transport systems and modes to each other will boost the transport sector and ensure efficiency thereby increasing productivity, lowering cost and facilitating distribution. Since 2015, the State projected a railway development plan in Cameroon but till then it has not been realised those limiting efficiency and full integration in transport modes in Fako Division (Table 3).

Table 3: A projected railway development plan in Cameroon

No.	Section	Major Intermediate points	Function
1	Edea-Lolabe (Kribi Deep Sea Port)	Koukoue, Mbebe, Fifinda, Londji	Brach line
2	Mballam-Mbalmayo-Lolabe (Kribi Deep SeaPort)	Djoim, Sangmalima, Mbalmayo, Kribi	Branch line
3	Douala-Limbe	Tiko	Industrial/branch line
4	Ngoundere-Douala	Ngoundere, Bertoua, Obala, Yaounde, Mbalmayo	Main line

Source: (15)

Effectively implementing this project to link these towns, Douala-Limbe and Tiko in the Fako Division will help to integrate and link transport systems and modes together which will assist in the flow and circulation of goods and services which all key elements of development that cannot be under looked. Exercising a good political will by policy makers and implementing transport development goals and interconnecting the all Division and Regions of the country and of course to the outside world is very important and primordial the effective development of our dear country Cameroon. It will also stimulated development and industrial progress especially in an era that we are craving for Horizon 2035

V. DISCUSIONS

It is crystal clear now that the transport systems in Fako Division is dynamic and have induced development in diverse ways which needs not to be over emphasised. At the same time, emerging constraints stand as a stumbling block to the effective operation of the transport sector in general.

Having taken note of this, it is important to optimise the transport sector all stages from infrastructure, security to effective integration of the systems and modes. To improve in infrastructure to ease circulation and the flow of goods and services, it can be done by canalising water ways especially from Tiko to Douala IV Sub-division. These areas are characterised by navigable rivers which can be exploited and used for transportation of both goods and people. These are actions that have been taken in Lagos-Nigeria and are very effective. This will also reduce traffic jam often witnessed from Banaberi in Douala towards right up the Mungo River [6]. Again, it is important to revamp the ports found along the Fako coastal belt to and roads linking them to promote effective integration of transport systems and modes in the Division and beyond. The long awaited commencement of the construction of the Limbe deep seaport and optimisation of the connectivity with an industrial Railway Line promised since the 1990s is till to become to fruition. Those, exercising perfect political-will in good fate for the development of our dear country is pivotal and central for the development of Cameroon our dear country. Also, creating more motor parks and decentralising over congested ones, opening up of new roads with sufficient sizes and rehabilitation of old ones are central aspects needs to be taken to into account when debating about transport optimisation and efficiency in Fako Division. These will make the transport sector more dynamic, efficient and effective. To this effect, production and distribution will becomes less costly and timely. It will equally foster industrial activities which are at the centre of job creation and well-being. Fako Division in the South West Region of Cameroon host a number of companies, and industrial plantations as earlier discussed which are crucial for job creation and so, any discrepancy at the transport sector will likely critical negative repercussions in the functioning and operation of the above mentioned. Checking insecurity by way of regulating transport systems and limiting the emergence of the rise of illegal systems like commercial motorbikes and clandestine vehicles is very important. It will limit theft, accidents and all forms insecurity disrupting the transport sector in Fako Division. It is also important to underscore that, charging police officers to be corruption free is important to avoid all of irregularities faced in our roads.

VI. CONCLUSION

The transport sector in the Fako Division as alluded is not in its best optimal level due to lack and poor state of roads and related infrastructure. The simply way forward is improving transport infrastructure, curbing insecurity of all sorts, integrating the different transport modes. However, this can only be achieved by an excellent political-well by policy makers. This is so because the political class seems to be reluctant in improving and optimising transport infrastructure in which lies our development agenda. If not so, what explains that fact that since the colonial days, transport infrastructures such as the case of ports; Idenau, Tiko and Limbe and even roads and tramways have been left unmaintained?



Transport infrastructure in Fako Division seems to depend of the remnant of the colonial masters. So, not to over emphasise the relevance the transport sector to development, it is noteworthy to engage and tilt development policies towards the development of the transport sector especially in the Fako Division. Also, state budget, optimal attention, holistic and proper transport development strategies should be designed to improve on the transport sector in the Fako to fast-track development. By this way, it may give a green light to the attainment of the horizon 2035.

DECLARATION

Funding/ Grants/ Financial Support	No, I did not receive.
Conflicts of Interest/ Competing Interests	No conflicts of interest to the best of our knowledge.
Ethical Approval and Consent to Participate	No, the article does not require ethical approval and consent to participate with evidence.
Availability of Data and Material/ Data Access Statement	Not relevant.
Authors Contributions	All authors having equal contribution for this article.

REFERENCES

- O. A. Adeniran & T.B. Yusuf, Transportation and National Development: Emphasis to Nigeria. *Developing Country Studies*. ISSN 2224-607X (Paper) ISSN 2225-0565 (Online). Vol.6, No.9, (2016).
- B.Bamidele, Maritime transportation industry in Nigeria: structure, analysis, challenges and prospects. Department of geography and regional planning, Faculty of Social and Management Sciences, Olabisi Onabanjo University, Ugun state, Nigeria. A paper presented on the -3-day training program for staff of the Nigerian maritime administration and safety agency (NIMASA) on cooperate executive development held at NIMASA resource centre, Kirikiri, Apapa, Lagos, Nigeria 4th -6th November 2014. 13p.
- S. Peter, E. Rita & M. Edith, The impact of road transport infrastructure on economic growth in Nigeria. *International Journal of Education and Research*, 3(9), (2015) 295–312
- J. V. Rensburg, & S. Krygsmann, Funding for roads in South Africa: understanding the principles of fair and efficient road user charges. *Transportation Research Procedia*, 48(2020), 1835–1847. <https://doi.org/10.1016/j.trpro.2020.08.218>. [CrossRef]
- T. Ojuku, & K. D. Tufoin, An assessment of maritime transport infrastructure and facilities along the Fako coastal belt of Cameroon. *Revue Territoire Sud*, University of Dschang, No.5, ISSN 2709-4359 (online). (2022)19-31.
- K. D. Tufoin, T. Ojuku, & P. Nneccdem, Dynamics of Maritime Trade along the Fako Coastal Belt of Cameroon: Ambiance, Challenges and Sustainable Combat Strategies. *Saudi Journal of Humanities and Social Sciences*. ISSN 2415-6256 (Print) ISSN 2415-6248 (Online). (2022)313-323. [CrossRef]
- Buea Council Development Plan. Annual communal development plans for Cameroon. *Buea Council*. (2018)18
- O.Y. Ifesinachi, J.A Ibukun, and P. Maisie, Stable seas: Gulf of Guinea. A program of one earth future. <http://dx.doi.org/OEF.2020.043>. (2020)124
- D. E. Onwuegbuchunam, Priority areas in Nigeria's maritime sector: Developing agenda for research. *International Journal of Transportation Engineering and Technology*. doi: 10.11648/j.ijtet.(2019)0503.13. ISSN: 2575-1743 (Print); ISSN: 2575-1751 (Online) retrieved from <http://www.sciencepublishinggroup.com/j/ijtet>
- L. Eon-Seong, Knowledge Resource in maritime transport industry: A case analysis. *The Asian Journal of Shipping and Logistics*. Vol 28, No 2, (2010) 297-340. [CrossRef]
- A.E. Owoputi, P.I. Ifabiya, & C. Akpund, Opportunities and challenges of inland water way transport in the south west coastal belt of Nigeria. *The planning Research Journal*, Vol. 06. No 1.

- Department of Geography and environmental management, university of Ilorin, Nigeria. (2018)10-17
- E.E. Ezenwaji, Constraints on Effective Water Transportation in Some Riverine Communities of Old Anambra L.G.A., Anambra State. *A Paper Delivered at the 2010 Rural Development Seminar, Rural Transportation in Nigeria*. Imo State University, Owerri, 31st March to 1st April, 2010. 17p.
 - B. Bamidele, (2013). Effective intermodal and integrated system of transportation: panacea for African economic integration and development. Department of geography and regional planning, faculty of management sciences, Olabisi Onabanjo University, Ugun state, Nigeria (2013)24.
 - JICA. Data Collection Survey on the Transport Network Development in Douala, Republic of Cameroon. Final Report. *Japan International Cooperation Agency (JICA)*. (2017)270 p.

AUTHORS PROFILE



Tufoin Kilian Diang is a research PhD student from the University of Yaounde 1 conducting research on the topic Dynamics, implications and management strategies of maritime transport along the Fako coastal belt of Cameroon. I have over 7 publications to my credit both in home and international journals. I am also acting as a visiting lecturer to the University of Bamenda in the Higher Institute of Transport and Logistics. I am 29 and focuses my research on transport and transportation. My area of research has been on the domain of road transport and maritime transport especially along the Gulf of Guinea. I am also working on maritime security and transportation along the Gulf of Guinea.



Dr. Tosam Hycinth Ngong holds a PhD in Geography obtained from the University of Buea in 2019. He is currently a lecturer in the Higher Institute of Transport and Logistics of the University of Bamenda, the Head of Department for Maritime Transport. He research focuses on transport and commerce. He supervises undergraduate and Post Graduate students in the higher institute of Transport and Logistics and in the Department of Geography and Planning of the University of Bamenda. He has published 10 scientific articles in local and international journals. He is currently working on research projects in Urban and environmental Geography.



Ngwa Patience Lum is a PhD research student from the University of Bamenda (UBa) carrying out a research on the topic "Transport Systems Dynamics and Development Implication in Fako Division, South West Region of Cameroon". Presently, Ngwa Patience Lum is a Lecturer in the Higher Institute of Management Studies Buea (HIMS), Department of Logistics and Transport Management for the past Four years. Ngwa Patience Lum has also taught in many higher schools of learning in Buea among which are: Landmark Higher Institute Buea, ACHAS Higher Institute Buea, Chartered Higher Institute of Technology and Business Management (CHITECHMA) Buea. Currently, she is the Registrar in ACHAS where she has been in this position for three years.



Ayukebi Linda is a first-time author, and holds a master's degree in Geography. I am presently a Ph.D student in the University of Yaounde 1, and works for the Ministry of Secondary Education. I am a researcher in the field of Geography, specializing in environmental studies. Prior to my interests, I filled various roles in environmental management, project management, creative writing, and editing. I spent six years in the classroom learning, teaching and running programs as an avid Project coordinator at GIF1, a not-for-profit organization in the Southwest region for three years. I am now CEO of Worldwide Environment Picture (WEP) in Yaounde since 2018, supporting sustainable development and climate action.

Dynamics, Implications and Management Strategies of Transport Constraints in Fako Division, South West Region-Cameroon



Dr. Ndi Roland Ako, a senior lecturer of the University of Yaounde 1, my research focuses on climatic variability and environmental risk. I have been lecturing in the University of Yaounde 1 for over eleven years. I am also interested in areas of transport and transportation. I have also published works on transport dynamics and the integration of transport system, I have supervised over 17 master dissertations on both climate change and road transport. Currently, I am working on a project related to the challenges of urban transport in Yaounde. I am a resource specialist and also acting as a visiting lecturer to the University of Dschang.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of the Lattice Science Publication (LSP)/ journal and/or the editor(s). The Lattice Science Publication (LSP) and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.